

**Hong Kong Monetary Authority**

**Deposit Protection Study**

**FINAL REPORT**

31 July 2000

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## DEFINITIONS AND ABBREVIATIONS

|                                |   |
|--------------------------------|---|
| <b>Aggregate deposits</b>      | The consolidation of all deposits of a particular depositor within the same bank.   |
| <b>AI</b>                      | Authorised Institution.   |
| <b>Bank interview round</b>    | A series of interviews with selected banks during mid May 2000.   |
| <b>BCCHK</b>                   | Bank of Credit and Commerce (Hong Kong) Ltd   |
| <b>Call-for-comments paper</b> | A Government Consultation Paper on Deposit Protection issued by the Monetary Affairs Branch (predecessor of the Financial Services Bureau) in February 1992   |
| <b>Call report data</b>        | Data extracted from the AIs' Return of Assets and Liabilities, the AIs' Return of Capital Adequacy Ratio and internal information provided by the MA on CAMEL ratings.  |
| <b>CDIC</b>                    | Canadian Deposit Insurance Corporation  |
| <b>Coverage cap</b>            | The maximum amount of a deposit that would be eligible for the purpose of calculating payment when DPS is triggered.  |
| <b>Covered deposits</b>        | The full or partial balance of deposits covered by the DPS as determined by the coverage cap.   |
| <b>Customer deposits</b>       | All deposit liabilities of licensed banks due to parties other than banks and other authorised institutions. Normally refers to demand, savings, current account, time, call and notice deposits from customers.  |
| <b>Deposit Data Survey</b>     | The survey of deposit balances at a sample of 32 licensed banks carried out by the MA during the project.   |
| <b>DIS, public or private</b>  | Deposit Insurance Scheme. A form of deposit protection funded by the private sector that provides insurance i.e. where the covered element of the depositor's claim is guaranteed against loss. To be distinguished from the more general term of Deposit Protection Scheme, which can include systems that protect the depositor but without providing a guarantee. The qualifying comment "private" or "public" is used to distinguish whether the DIS is administered by the private or public sector. |
| <b>DPS</b>                     | Deposit Protection Scheme, a general term used to describe a formalised system of deposit protection regardless of its structure or conceptual approach. It can be used interchangeably to refer to a scheme as complex and broad as the FDIC, or as simple and narrow as providing depositors with advances against their claims.  |

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|--------------------------|--|
| <b>Exchange Fund</b>     | Fund managed by the HKMA that holds the official reserves of Hong Kong predominantly in foreign currency assets. |
| <b>FDIC</b>              | Federal Deposit Insurance Corporation  |
| <b>FSF Working Group</b> | A study group on Deposit Insurance established by the Financial Stability Forum in December 1999.                |
| <b>HKMA or MA</b>        | Hong Kong Monetary Authority   |
| <b>HKMC</b>              | Hong Kong Mortgage Corporation   |
| <b>Moral hazard</b>      | Refers to the incentive for banks to engage in riskier activities than they would in the absence of insurance.   |

# 1. INTRODUCTION

## 1.1 Background

The background to this study is the growing international perception that formal deposit protection has become an important feature of almost every developed banking system in the world. It is considered an important mechanism for boosting depositor confidence in the financial system and reducing the risk of withdrawal and the flight of funds from one bank to another or one jurisdiction to another. More broadly, it is viewed as an integral part of a comprehensive package of measures for enhancing financial stability in the face of increasing financial market volatility and ease of cross-border capital flight.

As evidenced by initiatives of major international organisations such as the Financial Stability Forum, World Bank, and IMF, deposit protection is increasingly being viewed as a part of sound contingency planning to enhance financial stability and protect small depositors in the event of a non systemic bank crisis. Deposit protection has been harmonised in the newly created single banking market of the European Union, and the IMF has advised that a properly designed system of deposit insurance can help to underpin the stability of the financial system in a country that meets certain necessary preconditions. In addition, the Financial Stability Forum has recently created a Working Group on Deposit Insurance “to assess the desirability and feasibility of setting out guidance on deposit insurance arrangements”<sup>1</sup>.

Deposit insurance was last publicly debated in Hong Kong in 1992 following the collapse of BCCHK. Whilst a formal deposit insurance scheme was not then introduced, a preferential claim system was implemented in 1995 to provide depositors with priority (to a cap of HK\$100,000) in the liquidation of a collapsed bank. Subsequently the Asian financial crisis in 1997 and 1998 has demonstrated in a number of countries in the region that external shocks and rumour may stimulate an unwarranted and immediate drop in confidence in a bank or of group of banks, the consequence of which can be a run or even failure. While it has survived the Asian financial crisis intact and has been comparatively free from bank difficulties, even a robust financial system such as Hong Kong’s is not immune from loss of depositor confidence induced by external shocks or untoward events. A short, temporary run on a local bank in 1997, for example, demonstrates that Hong Kong is not entirely free from risk in this regard.

Since the calming of the international financial markets after the Asian financial crisis, and the recovery of the Hong Kong economy, Hong Kong is now operating from a position of strength. The MA is already engaged in a program of measures to further enhance and strengthen the financial sector. To date these have included clarifying the actions it will take in its capacity as lender of last resort to the banking

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<sup>1</sup> See Financial Stability Forum, Working Group on Deposit Insurance, *International Guidance on Deposit Insurance: A Consultative Process*, June 2000.

system<sup>2</sup>, strengthened bank supervision and regulation<sup>3</sup>, and enhanced market discipline by improving disclosure<sup>4</sup>. Improvements in the current system of deposit protection would constitute an additional aspect of that program. Whilst banks are not expected to fail, prudent planning will help to cope with unexpected and unwanted contingencies. In light of the increasing emphasis on deposit protection in most major financial systems and the passage of time since the topic was last reviewed, it is appropriate to formally re-examine whether the existing form of protection is sufficient for Hong Kong given its position as a leading international financial centre.

## 1.2 Scope of Study

In March 2000, the Hong Kong Monetary Authority (“MA”) commissioned Arthur Andersen to study the need and possible options for enhancing depositor protection in Hong Kong, as one step toward strengthening the financial system. The study was aimed at making a fair and objective assessment of deposit protection in Hong Kong based on independent evaluation and consultation with the banking industry and regulatory authorities. The specific objectives of the study were to consider the relative costs and benefits of each of three broad alternatives centring on:

- a) maintaining the current level of priority claims protection; or
- b) enhancing the current system of priority claims protection; and/or
- c) introduction of deposit insurance.

The overall aim in evaluating these alternatives is to make recommendations on which of the possible options for deposit protection would best meet the needs of the Hong Kong banking system and its depositors in the event of a non-systemic failure of one or a combination of banks. Over the course of three months a comprehensive exercise has been carried out, including:

***Situational and diagnostic analysis*** - of current deposit protection arrangements in Hong Kong evaluated against local market conditions, structure of the banking system, depositor characteristics, existing banking and insolvency law, and other factors.

***International benchmarking study*** - based on proprietary research and discussions with selected overseas deposit protection agencies and other interested groups, to provide a comprehensive selection of “best practice” examples of explicit and implicit deposit protection mechanisms.

***Bank industry interviews and survey*** - involving interviews with the senior management from a representative sample of 15 Hong Kong banking institutions, covering areas of concern among the banking community about deposit protection, as well as exploring technical features, operational issues and real and perceived risks of the alternatives under consideration. The interview sample was selected by the

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<sup>2</sup> See the MA’s “Policy Statement on the Role of the Hong Kong Monetary Authority as Lender of Last Resort,” June 1999.

<sup>3</sup> See Hong Kong Monetary Authority *Annual Report*, 1999, pages 48-49, for a discussion of the risk-based supervisory framework.

<sup>4</sup> See *ibid*, pages 57-59, for a discussion of new provisions relating to disclosure.



MA to ensure adequate representation from different types of institutions and banking industry constituencies.

***Deposit Data analysis*** - of call report data held by the MA, and a special survey carried out by the MA on 32 licensed banks covering 76% of customer deposits. The data gathered was used to identify relevant information about the deposit structure of banks to allow analysis of the costs and protection afforded by current and potential coverage.

***Financial modelling*** - to evaluate the funding requirements and costs under various protection approaches, and the level and nature of premia or contingency funding associated with those approaches under different scenarios.

This report summarises the findings of this comprehensive study in order to assist the MA in conducting public consultation over the possible need for enhanced deposit protection and the recommendations contained in this report.

## **2. EXECUTIVE SUMMARY**

### **2.1 Objectives**

The study considers the relative benefits and costs of current arrangements and alternative approaches to deposit protection for a non-systemic bank failure in Hong Kong. Possible approaches were evaluated by reference to the following primary objectives developed by the MA during the study:

- To provide a measure of protection to small depositors; and
- To contribute to the stability of the financial system.

The objectives of protection and financial stability are linked in so far as stability is influenced by the degree of confidence depositors have in the financial system. Not only does the potential for a loss encourage bank runs and other destabilising behaviour, but losses suffered by depositors can impact the payments system with consequent knock-on effects for other financial institutions and the wider economy.

### **2.2 Limitations of Current Protection Arrangements**

The current protection arrangements provide depositors with a preferential claim of up to HK\$100,000 over the assets of a failed bank in the event of its liquidation. In the majority of bank insolvencies in a well regulated system like Hong Kong's this provides a degree of protection to small depositors, as assets are likely to be sufficient to meet such a preferential claim. However, there are limitations to the protection offered and its contribution to financial stability. Current arrangements do not provide depositors with an absolute assurance against loss, as they are still dependent on the bank's assets being sufficient to meet their claims. The protection offered by the current arrangements is not transparent to the layman, and even in cases where depositors are certain to recover their money eventually, there could be substantial delays in payment pending completion of the liquidation process. The combination of these issues may undermine confidence in the protection offered. The limitations of the current protection arrangements result in it not being an effective deterrent to bank runs.

Further, under current arrangements the involvement of the Government in any specific bank failure has to be determined by the individual circumstances of the case. This leads to uncertainty amongst depositors as to the exact degree of protection that will be available, incurs delays and inefficiencies in determining the details of any intervention necessary to protect depositors in each case, and raises the possibility of inconsistency of approach between cases. A predetermined deposit protection scheme provides the opportunity for detailed contingency planning that will not only allow rapid and efficient reaction to any bank failure, but also removes uncertainty as to the exact role of the Government.

Notwithstanding the above, ensuring that any formal deposit protection scheme introduced can benefit from the existing preferential claim arrangements will be an important step in mitigating the costs and risks of such a scheme.

## **2.3 Selection of an Alternative Approach**

### **2.3.1 Overview**

The level of deposit protection may be enhanced to better achieve the objectives described above. After eliminating the status quo and those conceptual approaches that appeared inappropriate to the Hong Kong environment or the stated objectives, five possible approaches were identified, of which three are insurance based systems:

- Enhancement of existing system;
- Claims advance scheme;
- Government guarantee scheme (a publicly administered and funded insurance scheme);
- Privately administered and funded deposit insurance scheme; and
- Publicly administered, privately funded deposit insurance scheme.

A decision on which form of enhancement is most suitable to Hong Kong centres on how effectively it meets the stated objectives of promoting depositor protection and system stability.

### **2.3.2 Enhancement of existing system**

There are number of enhancements that can be made to the existing system independent of a formal deposit protection scheme. Of particular significance would be the introduction of a system to monitor, and if necessary ring-fence, the level of assets available to meet the depositors' claims in any liquidation<sup>5</sup>. However, such modifications can be included as complements to a more formal model, and if implemented in isolation will only partially address the primary objectives. The small depositor still suffers shortfall risk and loss of liquidity, albeit that his recoveries from liquidation may be higher than under the existing system.

### **2.3.3 Claims advance scheme**

A claims advance scheme by which depositors receive an up front payment against their deposit claim at a failed bank overcomes the liquidity deficiencies of the existing system. It would partially contribute to the primary objectives by helping to enhance system stability. However, it does not entirely protect depositors since they are still exposed to a shortfall loss. Consequently, the degree of depositor protection and confidence is more limited than under an insurance based system. Moreover, the financing of such a scheme will incur costs that will have to be met by public funds.

### **2.3.4 Insurance based systems**

The best protection for the small depositor is only achieved with an insurance based system. These rely on a third party guaranteeing the covered deposit, taking on an assignment of the depositor's preferential claim to mitigate the costs and risks in doing so. The study identifies three such systems: a government guarantee scheme; a

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<sup>5</sup> See **Minimum Asset Maintenance Requirements** in **Section 10**.

privately administered and funded deposit insurance scheme; and a publicly administered, privately funded deposit insurance scheme.

A full government-guarantee scheme would achieve the objectives, but requires the cost of such protection to be met from public funds. If that commitment is not acceptable as a matter of policy, the choice rests between a privately administered and funded deposit insurance scheme and a publicly administered, privately funded deposit insurance scheme. The viability of a privately administered scheme is highly questionable in terms of both credibility and practicality given the structure of the industry. By comparison, a publicly administered scheme has a number of advantages. It provides all the advantages of an insurance-based system without the drawbacks of a privately administered system or the burden on public funds of a government guarantee scheme. It allows close integration of the supervisory authority and the publicly administered scheme, ensuring a consistency of approach, efficiencies in costs of introduction and administration, better policing of risk, and above all tight co-ordination of the scheme with intervention measures to protect depositors. It is for all these reasons that publicly administered, privately funded deposit insurance schemes are the most commonly adopted in international practice.

## **2.4 Risks and Benefits of Insurance Based Systems**

It is often argued that insurance based systems can promote moral hazard by encouraging banks to seek risk without the threat of depositors withdrawing their money. They can weaken market discipline and reduce competition between banks on covered deposits since small depositors do not need to risk-price the interest offered by the bank in which they place their money. However, these potential shortcomings may be mitigated to a certain extent by capping the insurance protection level and through effective supervision of banks. It could also be argued that without an explicit insurance scheme covering all banks, there is an artificial distortion at present in favour of the larger banks. They are viewed as “too large to fail”, providing a *perception* by depositors of a certainty of intervention in their case against a possibility of intervention in a smaller bank.

Ultimately, if the overriding criteria is the degree to which the scheme addresses the primary objectives of the MA, an insurance based system provides a stronger form of deposit protection than existing arrangements. It represents an explicit undertaking between insurer and depositor, tends to be a more efficient and consistent mechanism for providing payments to small depositors, and is readily understandable by the small depositor. These features increase depositor confidence and protection over simple enhancement of an existing preferential claim system, providing the insurance scheme selected has credibility and can provide liquidity.

## 2.5 Use of the Exchange Fund

Any deposit protection system has to offer rapid settlement of the covered deposits if it is to be fully effective in reassuring the small depositor and reduce the destabilising impact of bank failure on the payment system. Careful supervision of banks, and the introduction of measures such as minimum asset maintenance requirements, will reduce the prospects of a shortfall in the banks' assets and maintain the liquidity of those assets. However, these measures cannot provide an absolute assurance that a distressed bank will have sufficient liquidity to meet this payment from its own resources. Requiring the deposit protection scheme to hold sufficient liquidity to meet all conceivable funding requirements would impose a significant funding burden, and one that seems unwarranted given the risk profile of the Hong Kong banking sector. The study therefore examines the use of the Exchange Fund to provide a backstop line of finance, with the costs of providing such finance to be reimbursed by the scheme. This would enhance the credibility of the scheme, whilst allowing the scheme's funding to concentrate on addressing the shortfall and the financing costs required.

## 2.6 Recommended Approach

Based on an evaluation of design features and a review of comparable international practice, a compulsory insurance scheme for all licensed banks providing coverage up to HK\$100,000 for qualified customer deposits is recommended. The scheme would either be directly administered by the MA, or have extremely close links to it to cover the regulatory, supervisory and intervention functions<sup>6</sup>. The cost of the scheme would be funded by the banking industry, with the Exchange Fund providing finance to meet the liquidity requirements of making depositor payouts where these could not be immediately met by the scheme's own resources. Accordingly, the recommended deposit protection scheme is a publicly administered, privately funded deposit insurance scheme.

While the costs of such a scheme will depend on a wide range of factors, the results of an initial analysis suggest that the cost could be relatively modest and within the expectations of banks. An indicative premium model indicated that an annual premium of 10 basis points on covered deposits could cover annual losses in the majority of circumstances, with the potential for reducing or suspending premia from existing market participants once sufficient reserves had been accumulated.

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<sup>6</sup> The exact governance and operational structure of the scheme is a matter of detail for resolution in the implementation phase. However, the increased transparency and accountability afforded by a separate legal entity would support the use of such a structure to administer the scheme, albeit one of modest size and closely integrated with the MA in its operations.

## **2.7 Conclusion**

While the final decision on enhancing deposit protection will be dependent on the results of public and industry consultation, the results of this study indicate that enhancements to the existing system of depositor protection are merited.

Whilst a range of basic enhancements to the existing system, including the provision of advances to depositors against their claims, would improve the cover currently available to depositors, they would not provide the same level of protection and credibility as an insurance based system. Whilst insurance systems have potential problems with moral hazard and competition effects, only an insurance based system insulates the small depositor from the loss of his deposit. There are a variety of possible approaches to insurance based systems. However, if any cost to public funds is ruled out, the best match to the objectives set for the study would be provided by a publicly administered but privately funded deposit insurance scheme. Under such an approach the deposit insurer is administered and controlled by the Government, but accountable to the public and the banks which fund it.

If it proves impossible to reach consensus on the implementation of an insurance based system, then consideration should be given to a claims advance scheme. Provision of an advance against a depositor's preferential claim, taken in conjunction with the general enhancements identified, would provide at least a basic measure of enhancement to the existing preferential claims system.

### 3. CURRENT PROTECTION ARRANGEMENTS

#### 3.1 Current Legal Arrangements

Current protection is primarily based on explicit provisions in Hong Kong Law that give small depositors some priority over the assets of a failed bank in the event of its liquidation.

Under the Companies Ordinance CAP 32 depositors are entitled to receive priority for their aggregate deposits, up to a maximum of HK\$100,000, in the event of bank liquidation. Preferential payments to small depositors rank after secured claims and a number of other preferential claim classes, which include those associated with wages and statutory debts to the Government. Depositors rank prior to all ordinary creditors – a significant benefit, as ordinary creditors are likely to constitute the majority of claims, including all unsecured inter bank advances and depositors' claims in excess of the HK\$100,000 per depositor cap<sup>7</sup>.

#### 3.2 Limitations in the Current Arrangements

Depositor priority schemes such as that used in Hong Kong are an enhancement over the ordinary, *pari passu*, claim positions of creditors in most jurisdictions, but they are not necessarily effective at avoiding bank runs, which may lead to rapid weakening of confidence in the financial system generally.

Ordinary depositors can understand the implications of the current arrangements for payment risk, loss of interest earnings, and timing of payout. They will act accordingly when a perceived risk appears. Moreover, the limitations of the current arrangements have implications not only for the degree of protection currently provided to depositors and their level of confidence in that protection, but for the creation of any DPS designed to enhance depositor protection. The major factors influencing each are discussed below and include:

- Limitation of coverage to the net assets that are available and thus potential for depositor loss;
- Payment delays caused by the necessity for a formal insolvency, i.e. liquidation to occur in order to crystallise any entitlement;
- Limited trigger mechanism; and
- Loss of interest earnings in the period between the petition for insolvency and the payout to depositors.

***Limitation of coverage*** - The settlement of a depositor's claim is limited to the value of net assets available for sale to satisfy the claim. This means that depositors are not entirely protected from losing their money in bank liquidation. While the assets held by banks in the past seem to have been sufficient to avoid any shortfall loss to

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<sup>7</sup> The Deposit Data Survey indicates that at HK\$100,000, covered deposits would amount to approximately 20% of total deposits.

depositors upon failure, this is no guarantee that depositors may not start a run if there is any indication that their bank is distressed. The significant volume of deposits held by foreign banks in Hong Kong increases the risks of potential loss since any assets held overseas and/or encumbered might not be available to Hong Kong creditors until the domestic jurisdiction creditors have been settled. This makes recovery dependent not only on sufficient assets being available, but also on those assets being available for liquidation in Hong Kong and available for preferential creditors.

***Delays in payment caused by requirement for formal insolvency proceeding -***

Depositors have no clear indication of speed of their repayment. In any liquidation, in the absence of a liquidity scheme whereby someone assumes payment risk in order to speed payments to depositors, the speed of payment of preferential claims is dependent on a number of factors. These include the realisation of the assets, the resolution of possibly competing claims against those assets<sup>8</sup>, the costs of the liquidation itself, and the adjudication of **all** claims in the creditor class in question. Any disputes or irregularities in any of these aspects can significantly delay payout, unless the value of the assets available is so large that the full settlement of priority creditors' claims is a foregone conclusion. The situation is even more complex when the bank in liquidation has assets and creditors overseas or, for that matter, if the case involves the onshore assets and claims of a foreign bank operating in Hong Kong.

***Unclear and limited trigger mechanism*** – One of the fundamental principles of an effective deposit protection scheme is that it should be clear to the small depositor and structured to minimise or avoid depositor loss, otherwise it can detract from confidence in the scheme.

Given the complexities associated with bank insolvency and resolution in general the current legal arrangement for protection is not clear to ordinary depositors. Legislation identifies the issuance of a winding up order as a definitive point at which depositors receive a preferred claim. However, there are simply too many factors and uncertainties associated with the process to give any assurance after that point as to when a depositor might get his money back. Moreover, the current arrangement only provides preferential protection to depositors in the event of a formal liquidation. This limits the opportunity to explore the alternative, lower-cost routes of reconstruction or recapitalisation for a troubled bank while maintaining explicit depositor protection.

Based on the above issues, it is clear that there are limitations to the effectiveness of the current preferential claim based system. It limits the degree of protection currently offered to small depositors and by extension the effectiveness of the system in contributing to system stability<sup>9</sup>.

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<sup>8</sup> This includes secured creditors.

<sup>9</sup> It also limits the protection available to any formal DPS system introduced to assist depositors.



### 3.3 Subrogated Preferential Claims

It appears that s.265 CAP 32 provides a “subrogated” preferential claim for a third party advancing sums to a depositor in exchange for an assignment of their preferential claim. Subrogation allows the third party to receive any dividends that the depositor would have received if they had not assigned their rights. However, the provisions with regard to the HK\$100,000 cap, and the terms and timing necessary for the assignation to be eligible for a preferential claim, are unclear. Any possibility that the third party might receive a lesser claim entitlement provides a disincentive to pay out depositors, even though doing so would benefit small depositors and would not result in an overall increase in the total value of preferential claims.

The ability of a DPS to “step into the shoes” of each depositor it pays out and receive an equivalent preferential claim in each instance has a material impact on mitigating the costs and risks to the DPS. If a DPS is introduced, a review of the current legislation in this regard should be carried out, and whatever amendments deemed necessary to ensure that the DPS secures such a right should be implemented. For the purposes of this study it has been assumed that the DPS will have the benefit of preferential claim status for its payments to depositors<sup>10</sup>.

### 3.4 Expectation of Protection

In addition to protection offered under the current legal arrangement, it is possible that the public believes the authorities offer additional implicit protection.

It is typically difficult to determine whether implicit protection exists, as this depends entirely on depositors’ perception. The success in handling bank failures to date may give rise to an expectation of protection for depositors in future cases. In Hong Kong the general public has not lost funds from a distressed bank in Hong Kong in any of the major cases of bank insolvency or bank problems over the past 20 years. As the cases to date have not been identical either in their cause or in the approach used to resolve the problems, the nature of intervention and the extent of depositor assistance may have led to an expectation today that protection beyond legal priority currently exists. This is despite the fact that in the BCCHK case repayment to depositors was from the institution’s own assets.

This presents a difficulty for the Government. The nature of its subvention is effectively defined by the way it reacts to each problem case, rather than according to an explicit contingency plan that can define more clearly the role and extent of Government support in the resolution of failed banks. The reality is that any form of implicit protection in the system, albeit formulated on a case-by-case basis, makes a bank crisis far more stressful and uncertain than would be the case if protection was clear and transparent. The perception that the Government will extend protection to different classes of depositors may cause them to behave as if their funds are going to be protected in any bank failure. This may weaken market discipline to a greater extent than what might result from a formal protection scheme. Furthermore, the lack of a clear protection policy to refer to at a time of bank distress introduces an element of uncertainty for depositors and the broader market. This can increase instability in times of crisis and ultimately increase the cost of any protection that is provided.

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<sup>10</sup> Either through operation of the subrogation principle, or through the creation of a new class of preferential claim. For discussion of the latter aspect see **Section 10**.

### 3.5 Need for Deposit Protection Enhancement

The current legal arrangements for protection have advantages over financial systems that offer no coverage, implicit coverage, ambiguity, or full coverage. However, they do not provide an assurance to depositors of recovery, may be slow in providing compensation, and have limited impact on instilling confidence in depositors that they will recover their deposit when they may need it. This is in addition to the risk that they may lose all or part of the principal of their deposit, or at least forego interest income on their funds in the course of insolvency proceedings if their bank does fail. Moreover, the limitations of the current arrangements may increase the pressure on the Government to provide additional ad hoc protection if a problem arises.

These protection arrangements have not fully been effective in assuaging depositors' concerns in the past, and there is no evidence that they will ensure financial stability in the future.

As revealed by the results of the bank interview round, the majority of banks indicated they believed small depositor confidence was sensitive to actual or rumoured events in Hong Kong's banking system. On a scale of 1 to 10, where 10 was deemed "adequate," the average score given for the adequacy of existing protection for small depositors was 4.40<sup>11</sup>. None of the banks rated the protection perfectly adequate.

The remainder of this report examines in parallel two possible approaches to strengthening deposit protection in Hong Kong.

- **Enhancement of the current legal arrangements** – The current system could be significantly enhanced by the introduction of a package of enhancements that would:
  - Increase the probability of realisable assets being available in Hong Kong to meet depositors' claims in the event of a bank collapse;
  - Accelerate payment of small depositors' claims, whether as an advance on their claims or in settlement; and
  - Provide greater clarity and transparency of the circumstances under which depositors actually received protection.
- **Introduction of a formal deposit insurance scheme** -- based on international standards to provide limited, guaranteed protection for and timely payment to small depositors in the event of bank failure.

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<sup>11</sup> Out of 15 banks surveyed 10 rated adequacy "5" or less; 7 rated adequacy "3" or less.

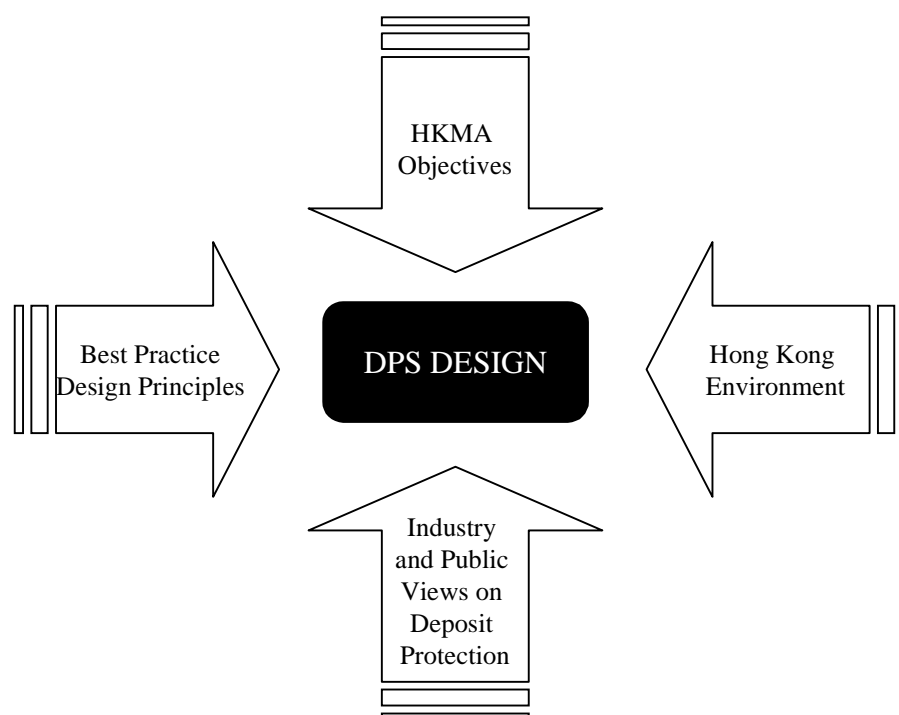
The enhancement of the current legal arrangements may be implemented without the introduction of a formal deposit insurance scheme, or it could form part of a complementary package of improvements that includes formal deposit insurance. They can be accomplished by changes in law and intervention policy and represent a minimum base level of enhancement that is needed to overcome some of the deficiencies noted.

All improvements to current arrangements should provide a clearly understood mechanism for dealing with bank failures, enabling a rapid and confident response to any given crisis, significantly assisting in restoring confidence in the system.

## 4. KEY DESIGN INFLUENCES FOR A NEW DPS

There are a number of competing forces influencing the design of a DPS for Hong Kong. They arise from differences in the objectives and constraints imposed by different stakeholders to the process, as well as the unique features and size of the Hong Kong financial system itself. Ultimately the success of any DPS can be gauged by how well it deals with those forces. A graphical representation of the evaluation framework used for this study is as follows:

**Figure 1: Evaluation Framework**



### 4.1 MA Objectives

Following a situational and diagnostic analysis of the current arrangement in Hong Kong, and a benchmarking exercise of international practice, the MA developed two primary objectives and one subsidiary goal for DPS in Hong Kong. The two primary objectives are to:

- **Provide a measure of protection to small depositors; and**
- **Contribute to the stability of the financial system.**

These two primary objectives are linked in so far as stability is influenced by the degree of confidence depositors have in the financial system and their willingness to keep funds on deposit, despite actual or rumoured problems that might directly or indirectly affect their bank. The loss of liquidity by the small depositors of a failed bank can have a significant impact on their ability to meet routine payment

obligations, which will have a knock-on effect on other financial institutions and the wider economy. The intended corollaries for boosting small depositor confidence are: fewer bank runs, more predictability in the payments system, and a lower probability that the failure of one bank will impact other banks. The objective is not so much to prevent a run on an individual bank, but to limit the number of depositors with an incentive to run and to prevent a bank run from spreading across the system.

Protection for small depositors is also desirable for two important public policy reasons. First, there are social externalities associated with the protection of an individual's life savings. People seek security in being able to place their money on deposit in a bank without the threat of loss. Correspondingly, the collection and distribution of household savings by the financial system forms the bedrock of financial intermediation in most economies and thus it is an important aspect of economic growth and stability. Second, protection for small depositors, whether implicit or explicit, is a political reality in most markets. As discussed above, in the absence of explicit protection, many jurisdictions have a history of extending de facto guarantees or otherwise intervening to assuage depositors' fear in the face of crises, either to prevent a systemic breakdown or to buttress public confidence.

In the broader context of the Government's role as regulator and the market's possible perception of implicit protection against losses by depositors when a bank fails, the enhancement should also seek to achieve the following secondary objective:

- **Define more clearly the role and extent of Government support in protecting depositors when banks fail.**

Protection of small depositors, no matter how well executed, may not eliminate bank runs entirely – either on an individual or system-wide basis. No scheme can predict or guarantee the behaviour of depositors. Moreover, in any limited system of explicit protection, sensitivity to unexpected withdrawals from large depositors in particular can be a manifestation of market discipline, which is important for controlling risk and encouraging prudent behaviour from banks.

Consequently, deposit protection will not supplant the role of the lender of last resort to stem system wide bank runs, nor should it be expected to fully address catastrophic losses or eliminate the need for strong supervision.

## **4.2 Environmental Factors**

Local market conditions clearly influence the design of an effective DPS. These include:

- Market volatility;
- Small depositor volatility;
- Significant number of foreign banks;
- Retail deposit concentration;
- International financial centre role; and
- Supervisory and regulatory regime.

Each is considered below.

**Market volatility** - Official forecasts expect economic growth to double to above 6% per annum in 2000, a level above the average of 5% growth before the Asian crisis. While Hong Kong has overcome the challenge of the Asian crisis successfully—more successfully than most other countries in the region -- there is increased volatility in the financial markets and in macro-economic performance since the Asian crisis that began in 1997. Moreover, Hong Kong's exposure to adverse developments abroad—including those in the United States and Japan -- have been underscored by recent market events since the crisis. Additional protection for depositors should be focused on increasing public confidence, and reducing exposure to a potential loss of confidence in banks that can be fuelled by external shocks and market volatility.

**Small depositor volatility** - Hong Kong has experienced bank runs by small depositors in the past, in spite of effective supervisory efforts to ensure safety and soundness within the banking system. In addition, on occasion some runs on failed institutions have spread to other institutions. A number of the banks interviewed expressed their belief that small depositors lack the ability and information to differentiate between safe banks and risky banks, using size as a proxy for security.

**Significant number of foreign banks** -The branches of foreign banks are prominent in the banking system, accounting for 122 of the 153 banks that were fully licensed to operate in Hong Kong at the end of 1999. Foreign branches held 47 percent of licensed banks' deposits, but a much larger percentage of the assets. In fact, the average deposit-to-asset ratio of foreign incorporated banks based on call report data as at December 31, 1999 was almost half the ratio reported of Hong Kong incorporated banks.

The extent of foreign bank branch penetration in Hong Kong is such that banks clearly must be included in any DPS to avoid a major distortion of the system. However, there are a number of factors stemming from the foreign bank presence that will have important implications for enhanced deposit protection. First, there is more limited supervisory scope over the branches of foreign banks, which can make it difficult to adequately assess the risk of explicit deposit protection provided to these banks. Second, the presence of a legal entity spanning jurisdictional boundaries raises significant risks of asset and liability migration and by extension a reduction in recoveries. As set out in **Section 3**, the potential of a higher shortfall risk in an overseas based insolvency proceeding could result in greater risk to a DPS. There are also a host of practical problems that will arise in the handling of both claims and the subrogation of claims settled by a DPS in a multi-jurisdictional environment. Careful consideration will have to be given to the coverage of foreign bank branches in the design and funding of the scheme, as well as any regulatory enhancements that might be associated with mitigating risks of shortfall.

**Retail deposit concentration** – Five deposit-taking banks hold approximately 43 percent of total deposits from customers. This degree of concentration poses significant challenges for a DPS in several respects. First, the concentration of deposit exposure throws into question the ability of any DPS to cover the very largest institutions without a full guarantee from the Government. Second, any funding

mechanism will be heavily reliant on these institutions to the extent that the costs do not flow through to depositors. This underscores the need to make the scheme as equitable as possible for banks in terms of coverage and cost.

**International financial centre role** – Given the widespread employment of deposit protection schemes around the world, a question arises whether failure to implement a formal scheme could detract from Hong Kong's reputation as a world-class financial centre. Equally, it is important to ensure that deposit protection does not detract from its competitive position.

**Supervisory and regulatory regime** – A strong supervisory and regulatory environment forms a strong foundation for the implementation of formal deposit protection and accordingly the existence of such can be highly effective in reducing the cost of deposit protection. It is the first line of defence against risk.

### 4.3 Bank Views on Deposit Insurance

The results of the public consultation carried out in 1992 revealed that there was considerable opposition to the introduction of formal deposit insurance by a number of banks. The bank interview round, conducted in May through June of 2000, revealed widely dispersed views.

There was generally strong support from smaller and medium sized banks for deposit insurance, which consider that it will reduce the risk of bank runs, which in their opinion falls disproportionately on smaller institutions. They also believe it will promote competition for smaller deposits by focusing depositors' attention on pricing and service rather than the size of the bank.

The larger banks were generally opposed to deposit insurance on the grounds of perceived market distortion. They pointed out that the elimination of risk below the coverage cap encourages moral hazard issues, and distorts market competition by eliminating risk as a consideration for the depositor. In this regard they consider it increases rather than reduces risk in the sector as a whole. Moreover, they believe that deposit insurance financing costs are likely to be disproportionately borne by the major banks, whose risk of failure they consider to be lower. The larger banks apparently see themselves as financing a scheme that they are unlikely to directly benefit from – their failure will require a far larger scale of intervention. This is a common argument raised by stronger banks against the introduction of deposit insurance, but it discounts potential benefits to individual banks arising from strengthened depositor confidence in the banking industry as a whole.

The introduction of any type of formal deposit protection in the face of such arguments is normally dependent on a public policy decision. A decision for a formal protection scheme is usually taken to protect small depositors, reduce the risk of bank runs and maintain system stability, and as such is imposed on the sector in the interest of a wider, common good.

The structure of the bank industry in Hong Kong and the degree to which views on deposit protection vary increases the difficulties in introducing a formal scheme with the consensus of the banking community. This underscores the need to balance the varying concerns of banks against public policy objectives and good design

principles. In this respect, also taking into consideration the environmental factors specific to Hong Kong and the objectives set forth by the MA, any form of DPS enhancement should seek to achieve the following:

- Minimise funding cost and premia generally, and to the banks in particular;
- Limit both moral hazard and the impact on inter bank competition;
- Design a system that is appropriate to the specific requirements and unique features of the Hong Kong banking environment;
- Minimise additional compliance obligations;
- Have a clear rationale for introduction that demonstrates either practical benefits for the sector, improvement over current practice or indicates significant risks if a scheme were not introduced; and
- Embody design features that are consistent with international good practice and comparable jurisdictions.

#### **4.4 Preconditions and Guiding Principles for Good DPS Design**

The preconditions for an effective DPS have been defined by the Financial Stability Forum Working Group in its recent paper on deposit insurance<sup>12</sup>. They include the following:

- The legal regime should be able to maintain the rule of law;
- The economy should be healthy and macroeconomic policies appropriate to its continued health;
- The banking and financial system should be sound;
- The legal and supervisory system should be strong and, in particular, have power to discipline weak banks, close failing institutions promptly, and obtain the information it needs to perform its responsibilities successfully. Moreover, it should be accountable for its actions;
- The systems of accounting and auditing should meet international standards; and
- There should be adequate disclosure of information on the condition of the banking system and of individual banks to allow the public to protect its interests and to discipline the banking sector.

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<sup>12</sup> See the June 2000 Background Paper by the Financial Stability Forum's Working Group on Deposit Insurance.



Drawing from the FSF's paper and a range of other literature on deposit insurance, a number of key principles have also been identified as cornerstones for effective DPS design. The table below summarises these principles and their main implications, which are later used as a basis for determining the appropriateness of various options.

**Table 1: Guiding Principles and Their Implications for Good DPS Design**

| <i>Principle</i>  | <i>Implications for DPS Design</i>   |
|---|--|
| <b>Be transparent, credible and engender confidence in the people it protects</b> | <ul style="list-style-type: none"> <li>• Demonstrate adequate financial funding and/or reserves from a highly rated source.</li> <li>• Build on sound enabling legislation and have statutory authority.</li> <li>• Develop an efficient process for timely and consistent payment of depositors.</li> <li>• Create a binding obligation between the DPS and the people it insures.</li> </ul> |
| <b>Terms of coverage must be precise and clear</b>                                | <ul style="list-style-type: none"> <li>• Ensure full public disclosure of the precise terms of coverage.</li> <li>• Develop explicit policies for operation and protocol.</li> </ul>   |
| <b>Minimise moral hazard on banks and distortions in general</b>                  | <ul style="list-style-type: none"> <li>• Set coverage caps as low as possible without undermining DPS objectives.</li> <li>• Banks should bear some or all of the cost.</li> <li>• Strike an acceptable balance between covered and uncovered deposits.</li> </ul>   |
| <b>Achieve equitable treatment of banks</b>                                       | <ul style="list-style-type: none"> <li>• Assess insurance premia on covered deposits.</li> <li>• Seek to make cost of insurance to banking sector commensurate to the benefits provided.</li> </ul>  |
| <b>Avoid adverse selection</b>  | <ul style="list-style-type: none"> <li>• Make protection compulsory for all banks.</li> </ul>  |
| <b>Carry a clear line of accountability for operation and management</b>          | <ul style="list-style-type: none"> <li>• DPS must have clear responsibility for safeguarding resources and ensuring effective operations.</li> </ul>   |

In addition to the above, there are complementary measures that may be taken. While they are outside the design of a DPS, they could assist substantially in the efficiency or effectiveness of a DPS. These are considered in **Section 10**.

## 5. POSSIBLE APPROACHES TO ENHANCING DEPOSIT PROTECTION IN HONG KONG

### 5.1 Determining a DPS Policy

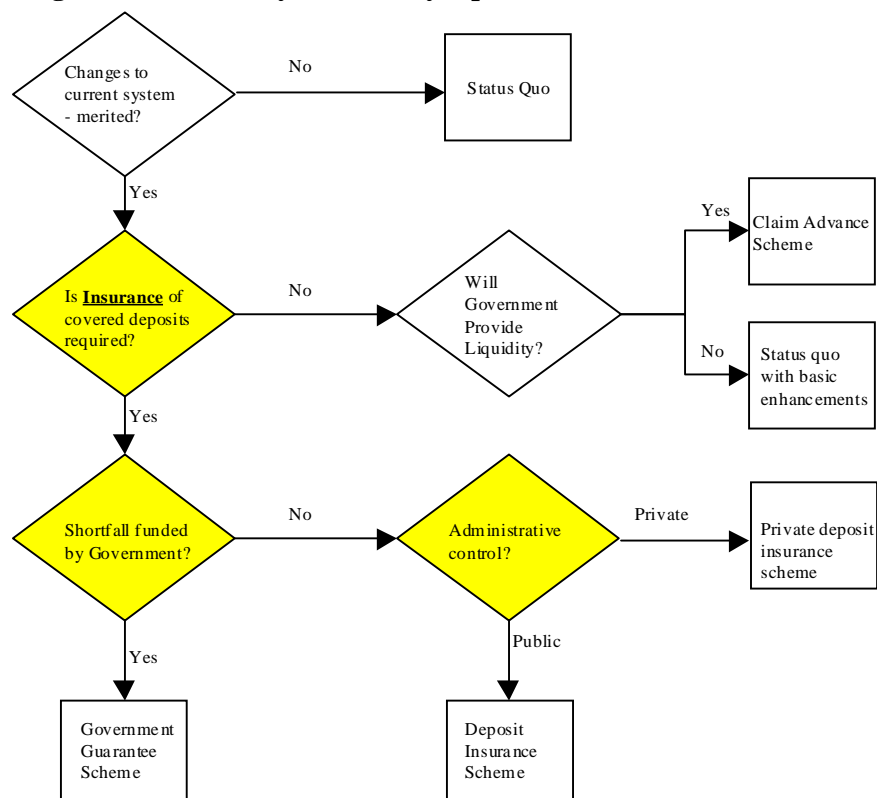
There is a wide range of possible approaches to instituting deposit protection. In addition to differences in conceptual approach, differences in detailed design features can also produce a wide variation of design options, each having a specific effect on the character, risk and impact of the DPS. Analysis of the viable options can be simplified if consideration of the detailed features is deferred until the preferred basic conceptual approach has been identified.

The selection of a preferred conceptual approach hinges on a combination of policy preference and the key design factors laid out in **Section 4**. To simplify selection, a decision tree is set out below identifying the key decisions and factors that should be taken into account to determine the most appropriate basic conceptual design among the following five alternatives:

- Enhancement of existing system;
- Claims advance scheme;
- Government guarantee scheme;
- Privately administered and funded deposit insurance scheme; and
- Publicly administered, privately funded deposit insurance scheme.

The generic design features are considered separately in **Section 7**:

**Figure 2: Analysis of Policy Options**



The analysis in **Section 3** indicated that a change to the status quo is merited, and by extension there is a need to enhance the existing form of protection afforded to depositors.

That leaves three key questions for detailed consideration, which guide the discussion to follow in this section:

- **Is *insurance* of covered deposits a more suitable form of protection than an *enhancement* of the existing protection arrangement; and if so**
- **Who bears the costs and risks of underwriting the insurance; and**
- **Who controls and operates the insurance scheme?**

In addressing these decisions, the key determinant has to be the extent to which the path chosen best meets the key design criteria identified in **Section 4**, and in particular the primary objectives of “providing a measure of protection to small depositors” and “contributing to financial stability.” In this regard, drawing from the principles outlined in **Section 4** and the benchmarking work carried during the course of the study, the key requirements for generating small depositor confidence in any system are *liquidity* and *credibility*.

Liquidity allows rapid payment of depositors, thereby alleviating financial hardship as a result of perceived or actual bank failure, and eliminates stress on the wider payments system. Credibility is a function of liquidity and DPS solvency, but in a broader sense is determined by how much confidence depositors have in the provider of the deposit protection or in the mechanism through which protection is afforded. On its own this is a key issue for system stability, and may substantially affect the policy decision made.

## **5.2 Is Insurance of Covered Deposits a More Suitable Solution?**

This question goes to the heart of the debate between the positive aspects of depositor protection and confidence versus the negative aspects of moral hazard and market distortion. Should a third party *insure* deposits up to the designated coverage cap, such that no risk is born by small depositors when a bank fails? The answer to this pivotal question ultimately becomes one of policy, based on an assessment of the relative impact on system stability of the positive effects of depositor protection versus the negative impact of market distortions that may be introduced by insurance. This decision also has to reflect a corresponding cost benefit analysis of the greater cost and complexity of an insurance system versus alternative approaches to legal enhancement. The relative merits of enhancing the system or introducing deposit insurance are considered in turn below.

### 5.2.1 Limited enhancement of existing protection

The alternative to insurance is some form of enhancement of the existing preferential claim system to address the shortcomings noted in **Section 3**. Two possibilities for this are envisaged:

- A claims advance scheme in which government funding such as the Exchange Fund is utilised to provide depositors with an advance against their claim; and
- An enhanced status quo alternative in which no funding is provided and the enhancements are limited to modifications of the existing preferential claim system.

The **enhancement of the existing legal preferential claim system** does constitute an option for enhancing deposit protection in the wider sense. There are number of clarifications and improvements that can be made to the existing system in terms of the cover levels provided, measures to improve asset cover for claims, clarity to the depositor and legal drafting. The latter should include an explicit provision for a DPS to have a preferential claim<sup>13</sup> for monies advanced in satisfaction of depositors' claims who would have otherwise qualified directly for a preferential claim. These enhancements can be implemented in isolation to any formal deposit insurance scheme. However, such modifications are not necessarily exclusive to a non-insurance model, and only partially address the primary objectives set in **Section 4**. The small depositor still suffers shortfall risk and loss of liquidity, albeit that the recoveries from a liquidation may be higher than before.

As an alternative, a further improvement could be made to the status quo by providing liquidity to the system to allow a **Claims Advance Scheme**. Under such a system the DPS would publish a formal policy documenting policy on the use of the Exchange Fund to pay an advance against depositors' claims. The amount advanced would be clearly stated for absolute clarity, but would probably be a fixed proportion of eligible deposits, not to exceed the priority claim limit set in law. The BCCHK 25% advance approach is an example of the technique<sup>14</sup>, albeit that the maximum payout would be smaller than that made in the BCCHK case.

This system would partially contribute to the primary objectives of DPS. It would provide a degree of system liquidity, allowing depositors to meet their ongoing everyday obligations, and would partially protect the depositor against the lost time value of money by accelerating dividends on at least part of the claim. It would clearly address the secondary objective for deposit protection in that it would clearly define the role and extent of Government support. However, there are certain disadvantages as follows:

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<sup>13</sup> Either by enhancement and clarification of the existing subrogation arrangements, or by introduction of a new preferential claim class – see **Section 10**.

<sup>14</sup> Any payout tied to the preferential claim limit would be restricted at an absolute maximum of HK\$100,000, and potentially less, whereas the BCCHK payout provided a 25% payout on deposits up to HK\$2,000,000 i.e. a maximum sum of HK\$500,000.

***Does not entirely protect small depositors*** - Technically the payment to depositors is an advance and repayable<sup>15</sup>. In principle this means a depositor's final recovery is still dependent on asset realisation of the failed bank. In practice, the DPS would require depositors to assign the Exchange Fund a prior ranking entitlement to any dividends against their claim, together with an undertaking to repay the advance should the preferred dividend prove insufficient to repay the monies advanced. In practice only the former is likely to be enforced by the DPS, since pursuit of depositors for repayment of the advance if the asset realisations are insufficient to repay the DPS is unlikely to be cost effective. It could also attract adverse publicity that would undermine public confidence in the scheme in future. Moreover, enforcing recovery from small depositors who have failed to get a significant dividend on their priority claim runs contrary to the primary objectives. So for example, if asset realisations were only enough to provide a depositor who had a claim of HK\$100,000 with a dividend of HK\$20,000 against his preferential claim, and the DPS had advanced HK\$25,000, the depositor would suffer a loss of HK\$75,000 and the DPS a loss of HK\$5,000.

***Financing costs would be borne by the Government*** - Whilst the advance made by the scheme would qualify as a subrogated preferential claim, significantly mitigating the shortfall risk, it should be noted that the financing cost would not. Without a revision of the preferential claim provisions to allow the inclusion of interest, which would run contrary to generally accepted insolvency practice, the recovery of financing costs would be dependent on the payment of interest on claims by the liquidator. Interest on claims in a liquidation is subordinated to the settlement of all ordinary claims in full. As such, the advance scheme is likely to involve costs being absorbed by public funds, either directly in terms of shortfall, or more probably in terms of the financing cost of the funds advanced. The costs to Government are less than under a Government Guarantee Scheme (see below) as they exclude the shortfall costs. However, although the advances may be quickly reimbursed (depending on the pace of asset realisations), the financing cost would constitute a real cost to public funds and may not be acceptable on policy grounds. As can be seen from the commentary on premium calculations in **Section 6**, the financing costs incurred could potentially be significant, although restricting the amount advanced to a proportion of the full preferential claim would reduce these.

An argument in support of either of the above enhancement options is that they are less vulnerable to the potential moral hazard and competition distortion which insurance-based systems can bring with them. Where the depositor is not insured, the element of shortfall risk carried should force the depositor to carefully evaluate the risk of the bank in which the deposit is being placed. This largely eliminates the moral hazard and competition distortion arguments commonly cited against the introduction of DPS. Furthermore, because it is not *insurance* per se there is no requirement to underwrite and pay for the deposit protection, other than of course the financing risk borne by the Government under the Claims Advance Scheme approach.

As a consequence of exposure to loss it seems likely that the confidence of depositors in the system would be less than in an insurance-based system. There is no evidence to suggest that it will be effective in curbing bank runs in Hong Kong. The fear of a

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<sup>15</sup> The Government Guarantee Scheme discussed under the various insurance options below covers a scenario in which the government absorbs the risk of a shortfall on the preferential claim.

shortfall provides a positive incentive to small depositors to withdraw funds in an apparent crisis, increasing volatility and system instability. The degree of depositor protection and confidence, and by extension system stability, is more limited than under an insurance system.

A Claims Advance Scheme may not be effective in helping to achieve the secondary objective of better defining the role and extent of Government support in the resolution of failed banks. The financing risk born by the Government under a Claims Advance Scheme represents an increase in the risk it currently bears.

### 5.2.2 Use of insurance based systems

There are a number of arguments that can be cited against insurance based systems:

***Moral hazard, cross subsidisation and reduction in competition*** – By its nature insurance can promote moral hazard by encouraging banks to seek risk without the threat of depositors withdrawing their money. It also reduces risk as an element of deposit competition between banks. Since small depositors are given a third-party guarantee on their money, they have less need to assess the risk of the bank in which they place their money. Notwithstanding service, convenience and the other amenities that form part of the “where to bank” decision, covered depositors have less reason to discriminate between banks by what the banks do with their money. This can enable banks to attract a greater volume of deposits by offering high interest rates, financing this by investing the funds in higher risk projects, and distorting competition as well as increasing system risk. In addition to the increased system risk, this leads to cross subsidisation of the premium costs of insurance by less risky banks.

However, the moral hazard associated arguments also have to be considered in context of the wider implications for the system. First, the overriding objective is to protect small depositors, and in doing so to contribute to the stability of the system. Only an insurance-based system really provides a significant degree of protection to depositors, and in that regard an insurance-based system is the best match against the primary objectives. Second, insofar as deposit insurance contributes to system stability it could be said to be a public good. Limiting the destabilising effects of bank runs and the impact on the economy occasioned by small depositors’ loss of savings and liquidity creates benefits that extend beyond the insured (the small depositor) to the banking system and wider economy. Finally, it could be argued that without an explicit insurance based system covering all banks, there is actually an artificial distortion in favour of the very largest banks. They are viewed as “too large to fail”, providing a *perception*, that depositors rely on, of certainty of intervention in their case against a possibility of intervention in a smaller bank. Whilst it is arguable that the size of the largest banks reflects their prudence and comparative lack of risk, size is at best an imperfect proxy for risk.

***Banking concentration*** - It could also be argued that the degree of banking concentration adds a significant degree of risk to any insurance based system. To be credible, the scheme cannot limit cover dependent on the volume of loss. It has to cover any bank in the system, yet the failure of the large banks would place a huge funding burden on a DPS. Without a Government guarantee, the credibility of the

scheme could be questioned. However, the basis and extent of any use of public funds has to be transparent and in the interests of the public.

As a generally accepted international practice a DPS should be designed to compensate small depositors either fully or in part in the event of non-systemic failure of any but the largest banks in the system. It should be capable of dealing with the banks most at risk of collapse, assisting as part of a package of measures in any larger crisis. It would be impracticable to design and fund a depositor protection scheme capable of addressing systemic or catastrophic loss in isolation. With this in mind, the concentration argument implies that failure of one or more of the largest banks in Hong Kong would constitute an event of such significance to merit significant intervention by the Government. If that is correct, the cost (or risk of cost, since the cost will be largely dependent on the recoveries achieved) to the public purse is certain. If a DPS could defray (if not extinguish) the cost of the exercise, this is a positive factor.

There is no doubt that any insurance-based system does have drawbacks. However, these pitfalls are not inevitable. They can be controlled by designing the DPS carefully to limit moral hazard by providing limited protection and ensuring careful regulation and supervision. Note too that the enhancements to the current system suggested above can in any event be built into an insurance-based approach. As noted in **Section 10**, careful supervision is the primary defence against moral hazard related problems. Whilst an insurance based system may increase the tendency for problems to occur, these may be resolvable through other means. Ultimately the selection of an insurance-based system over simple enhancements of the existing system depends on an evaluation of the relative merits of each. An insurance-based approach provides a far better match to the primary objectives laid down in **Section 4**.

### **5.2.3 Conclusion**

If the overriding criteria should be the degree to which the DPS successfully addresses the primary and secondary objectives described in **Section 4**, deposit insurance, despite its shortcomings, is a stronger form of deposit protection than existing arrangements:

- **It represents an explicit undertaking between insurer and depositor;**
- **It tends to be a more efficient and consistent mechanism for providing payments to small depositors; and**
- **It is readily understandable by the small depositor.**

These features clearly increase depositor confidence and protection over simple enhancement of an existing preferential claim system, providing always that the insurance scheme selected has credibility and can provide liquidity.

Insurance based systems will provide a far better “fit” to the primary objectives set for the Hong Kong DPS, and should constitute the preferred option. If however it proves impossible to reach consensus on the implementation of an insurance-based



DPS, then consideration should be given to a Claims Advance Scheme to provide at least a basic measure of enhancement to the existing preferential claims system.

## 5.3 Who Should Bear the Costs and Risks of DPS Insurance?

### 5.3.1 Shortfall risk absorbed by Government?

In purely practical terms, if the Government believes that the shortfall insurance risk is low or minimal and it is willing to fully underwrite it, a **Government Guarantee Scheme** could become a viable alternative to a purely private sector solution.

Under such a system, the Government would extend guarantees on covered deposits in licensed banks<sup>16</sup>. The MA would publish a formal policy documenting the conditions triggering the DPS and the payment terms and coverage, which in turn would be tied to the preferential claims limit. The major difference between this and other models is that the Government underwrites all risk on the insured balance with public funds - in effect providing explicit protection up to the coverage threshold. Public funds absorb the risk of a shortfall on asset recoveries and the financing costs involved. Any government funding beyond this level would be purely discretionary, and would have to be justified by a systemic failure or a major threat to the stability of the system.

This approach provides a credible form of deposit protection by providing a direct link to Government undiluted by any intermediary organisation. Without the need to create an intermediary body, and with no premia to calculate or collect, there is less effort involved in starting and administering the scheme than in any of the other insurance based models. The trade off between cost and effectiveness is good if the risks and costs to public funds are viewed as acceptable.

However, a fully Government funded scheme raises the issue of the use of public funds for the provision of free insurance for the apparent benefit of a minority – banks and covered depositors. The public good benefits of a DPS are not a complete defence, as the compulsory nature of the system and the wider economic and social good benefits do not preclude those benefiting most directly from the insurance from paying for it. While the shortfall risk to public funds may be constrained within acceptable limits by regulatory action, this does not make the undertaking cost or risk free. In addition, there is still the financing cost of bridging the timing gap between payments to depositors and asset recoveries to consider. As indicated in **Section 7**, the financing cost alone for a payout on a medium sized local bank may be significant. Given the above, any use of public funds to pay for the cost of protection may be unacceptable to the Government as a matter of policy and fiscal management. If the Government is not able on policy grounds to utilise public monies to absorb the costs of underwriting an insurance system short of a systemic or catastrophic crisis, a Government Guarantee System is not viable.

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<sup>16</sup> Exactly how this would be funded is not central to the issue – the central point being the use of public funds rather than passing costs onto banks or depositors directly. The approach in Hong Kong would probably be through the use of the Exchange Fund, citing the need to commit funds in order to maintain the stability of the financial system.



### **5.3.2 Shortfall risks taken by the banks or third parties in full or in part?**

If public funds will not be committed, attention has to focus on non-publicly funded schemes. This requirement would be consistent with international convention since most deposit insurance schemes require the banking industry to absorb at least some of the costs of protection. The rationale for this approach is the presumption that banks are the prime beneficiaries of the insurance through its impact on their ability to attract low or no-risk funds, and the wider benefits of enhanced financial stability on the banking industry.

However, in recognition of the wider benefits and the central role of the supervisory authorities in policing the risk, many systems are designed to mitigate the costs and risks to the funding banks. Furthermore, banks may not be required to absorb *all* losses above a prescribed level. The liability to banks that can arise from a series of material failures could form an unrealistic burden on banks, and further exacerbate system instability generated by the collapses. The funding design chosen for a system, in which costs and shortfall risks are underwritten by banks, has to consider this and provide a suitable method of limiting or deferring the cost in such situations<sup>17</sup>.

## **5.4 Administrative Control**

If banks are expected to bear the cost of risk, the next step is to determine the desired extent of government administrative control<sup>18</sup> of an insurance scheme. Government involvement will influence the relative viability of a purely private sector scheme or a publicly administered, privately funded model.

The decision will depend on three issues:

- **Capacity of the private sector;**
- **Desired level of credibility; and**
- **Broader policy requirements for control.**

### **5.4.1 Privately administered and funded scheme**

Little or no government control would imply a privately administered and funded scheme (“a private DIS”), a purely private sector solution, where the banks both fund and administer the deposit insurance scheme. This places the entire insurance burden on the banks. To the extent that banks want a privately funded and administered scheme, it is consistent with a market-oriented approach by which protection would be provided with only limited involvement by the Government. It also has the benefit of preserving a high level of market discipline in the system, while also achieving a greater form of protection than currently exists. However, the viability of a hands-off

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<sup>17</sup> See **Funding Options, Section 6.**

<sup>18</sup> In this context control means of the actual operation of the DPS, rather than regulation and supervision of a third party carrying out the function.

approach is very much influenced by the capacity of the private sector to provide the insurance.

#### *Capacity of the private sector*

The key aspect to note here is that such systems require the collaboration of banks within the scheme. As far as the Hong Kong banking system is concerned, the structure of the system and the diverse views expressed on deposit insurance<sup>19</sup> in general could make it very difficult for banks to organise a comprehensive scheme without substantial government involvement and financial resource. Equally, a scheme that only involved some of the banks in the system in effect provides voluntary participation, effectively splitting the deposit market between insured and uninsured deposits. As noted in **Section 7**, under the subsection on form of participation, voluntary systems can exacerbate system instability and are generally viewed as poor practice, with institutions such as the FSF Working Group strongly recommending compulsory schemes. Private systems that rely on the banking industry for financial support, and are in effect self-insuring, are also inherently unstable and apt to break up during banking crises.

#### *Desired level of credibility*

Even in circumstances in which the private sector has the capacity, the public may perceive deposit insurance without government participation as a weaker and less credible form of insurance. This could arise from a perceived lack of independence and therefore certainty of payout, or through the lack of a credible source of back up finance to make payouts quickly and, ultimately, protect small depositors. In this latter regard the volume of short term finance required for any DPS scheme that pays out rapidly could be considerable and beyond the financing capacity of banks. Even if private provision of that funding were available, it is likely to be relatively more expensive than government funding.

Therefore, a deposit insurance system with some sort of government backing or control could be more likely to achieve the objective of preserving public confidence, promoting the development of the financial sector and protecting small depositors. Whilst allowing a private scheme to utilise government funding is not beyond the realms of possibility, the utilisation and control of public funds by a private sector body may raise an unacceptable public policy issue.

#### *Broader policy requirements for control*

At the very least, any system left principally in the hands of the private sector would need to have government regulation and surveillance over the operations of the scheme to preserve credibility and as good public policy. It is far from clear how any comprehensive private DIS would be achieved in Hong Kong in practice given the large number of foreign banks from so many different jurisdictions. Moreover, there would be confidentiality issues as to the disclosure of information by the supervisory authorities to the DIS, albeit that such information would be necessary for the DIS to police its risk and set premia. Potentially this could require the private sector DIS to be provided with separate powers to access such information. This in turn would require careful policing of the confidentiality issue as well as duplicating an existing

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<sup>19</sup> See the commentary in **Bank Views on Deposit Insurance** in **Section 4**.

reporting burden on the banks. The need to introduce new regulation and supervisory systems to address both these requirements would significantly increase the costs and inconvenience of introduction and administration over a scheme where the public sector was significantly involved in the organisational control of the DPS.

### *Conclusion*

The difficulties envisaged with the creation and credibility of a private scheme raise doubts about its practicality. Although it can form a viable alternative, and has been included here to show the range of alternatives in the decision matrix, on the basis of the findings to date a private DIS is not recommended. There are material practical problems with its introduction in Hong Kong, not least of which is the difficulty in banks reaching agreement with sufficient consensus to allow the introduction of a comprehensive scheme. Moreover, in so far as depositors could question its credibility, its ability to meet the primary objective of increasing system stability may be undermined.

#### **5.4.2 Publicly administered, privately funded deposit insurance scheme**

If an insurance option is preferred, but the private DIS is rejected, this leaves a publicly administered, privately funded deposit insurance scheme (“public DIS”) for consideration. Such schemes are commonly used in international practice and represents the basis of sponsorship for the majority of schemes in operation today. They combine the synergy and strengths of a close relationship between the supervisory authorities and the public DIS with funding provided by the beneficiaries of insurance.

From an operational point of view, the public DIS would either be directly administered by the MA, or have extremely close links to it<sup>20</sup>. Its activities would be closely co-ordinated with the regulatory and supervisory functions of the MA to minimise the risk of bank failures and insurance costs.

To avoid duplication of effort and additional compliance burden on the banks, the public DIS role would largely be that of a paybox. It would assess and collect premia, and supervise the settlement of depositors’ claims under the scheme. It would guarantee deposit payouts or settlements (for example, by transferring deposits to solvent institutions). But it would rely on the MA to carry out the regulatory, supervisory and intervention functions associated with minimising the cost and risk to the fund, and protecting depositors’ interests. The cost would be funded by the banking industry. Such costs would include the cost of any borrowing, administration costs, and any shortfall between amounts paid out and recoveries to the subrogated preferential claim. It could have access to the Exchange Fund to finance the liquidity requirements of meeting the payout, but the costs of borrowing the finance would be a charge to the public DIS.

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<sup>20</sup> The DPS could equally be run by a separate government controlled body overseen by the MA, or be a sub division of the MA. To a certain extent the decision on structure is largely a matter of policy choice rather than critical, but is discussed in **Structure of DIS** below.

Such an approach has a number of advantages over the other basic designs discussed. It provides all the advantages of an insurance-based design without the drawbacks of a privately administered system or the burden on public funds of a government guarantee scheme. It allows close integration of the supervisory authority and the public DIS, ensuring a consistency of approach, efficiencies in costs of introduction and administration, and a better policing of risk (and accordingly premia minimisation). It is for these reasons that this type of approach is one of the most commonly adopted in international practice. We have assumed the adoption of such a system for the remainder of this report, which is hereafter simply referred to as a DIS.

## **5.5 Structure of DIS**

The exact structure of the DIS is not significant to the decision to introduce a DIS. It is a matter of detail for resolution in the implementation phase once a decision has been taken on the introduction and design of any DIS. However, two basic options are apparent; a sub division of the MA, possibly with firewalls in place to deal with any perceived or potential conflicts; or a separate entity – possibly a Government owned corporation along the lines of the Hong Kong Mortgage Corporation. Some of the issues that should be considered in choosing between the two options are the requirement for close integration with the MA, any requirement for independent fund management, the staffing requirements to discharge its duties, and governance issues.

### **5.5.1 Integration with the MA**

The size of the Hong Kong market and the comparative rarity of bank failures would suggest that a completely independent DIS with its own supervisory powers is superfluous, and likely to lead to unnecessary duplication of costs and regulatory burden on the banks. At the same time, it could potentially dilute the close co-ordination between DIS and the MA essential to limiting the costs of bank failure. The sequence of events and actions taken by the MA is critical to ensuring the DIS's prospects for recovery of its advances. In addition, the use of the DIS to support value maximising rescue approaches rather than the blunt instrument of liquidation is only feasible with careful co-ordination with the MA. The preferred role for a DIS in Hong Kong would be that of a paybox function – the assessment and collection of premia, and the administration of payouts or account transfers. If arrangements are put in place to facilitate the exchange of information between the DIS and MA necessary to calculate premia, there is no reason that the DIS cannot be a separate legal entity. If it is a separate entity, the trigger conditions for payout would have to be designed to ensure the timing of the payout was co-ordinated with or initiated by the MA, but this should be fairly simple to achieve.

### **5.5.2 Fund management**

One of the issues raised by an *ex ante* fund is the requirement for management of the funds held. The Exchange Fund already fulfils a treasury function for a range of public monies, and has existing checks and balances in place to insulate the conduct of those activities from the regulatory and supervisory role of the MA. It would therefore seem logical to extend its responsibilities to fund management of any DIS

funds. This would remove any requirement for the DIS to have a separate infrastructure to handle the funds under supervision.

### **5.5.3 Staffing requirements**

Where a DIS requires significant numbers of staff, a separate entity can be necessary to provide a proper management infrastructure. However, in a paybox role the administrative staffing requirements for premium calculation and collection are not demanding, and the comparative rarity of bank failure argues against a department continually staffed for occasional peaks in work effort associated with payout. Moreover, dependent on the details of payout mechanism, even this role may not be heavily staff intensive. If depositor's balances were transferred to another institution, much of the work would be automated and could be addressed by the bank staff of the two institutions concerned under the supervision of a Manager or Liquidator. Even with a cash withdrawal or cheque based account settlement system much of the work could be passed onto the staff of the Liquidator or Manager appointed to supervise the collapsed bank. The staffing requirements in a DIS that does not carry out supervisory or investment functions are limited, and largely irrelevant to discriminating between a separate entity and a sub-division. In either case temporary transfer of staff from other Government institutions may best accommodate what additional staff requirements did exist during a crisis.

### **5.5.4 Governance**

A separate legal entity does offer several governance, accountability and transparency advantages over the use of a sub division within the MA. The DIS's independent management offers an additional degree of accountability to the public and the funding banks, and a possible check and balance on the actions of the MA. If considered desirable, the board of directors could include representatives from the banking community to further emphasis these characteristics, and ex officio representation from the MA to improve liaison and co-ordination. In addition, the publication of such an entity's accounts would further increase transparency and accountability. Moreover, the use of a separate legal entity may simplify the administration of the scheme, particularly with regard to the collection of premia and the defence of any actions against the DIS over its payment obligations.

### **5.5.5 Summary**

If a paybox role is presumed for the DIS, the major differentiating factor between the use of a separate entity and the creation of a new subdivision within the MA's existing structure is that of enhanced transparency and accountability. One of the guiding principles for a DIS is a clear line of accountability for operation and management. As such, the use of a separate organisation appears appropriate, if suitable provision can be made for information sharing and co-ordination of the actions of the MA and DIS.

## 6. FUNDING APPROACHES, OPTIONS AND INDICATIVE DIS PREMIA

To the extent the Government determines that it will administer the DIS and provide liquidity, but any shortfall<sup>21</sup> to the scheme will be funded by the banks, the question of how to finance deposit insurance must be answered. This section addresses some of the key options associated with funding a DIS, including for reference the results of an indicative calculation of potential DIS costs.

### 6.1 Funding Approaches

There are two broad conceptual financing approaches suitable for consideration - *ex ante* funding and *ex post* funding.

**Ex ante funding** – An *ex ante* funding scheme is one with a significant up-front fund or cash reserve against contingent liabilities, which is built from periodic premium assessments on banks and is replenished by the same in the wake of bank failures. The amount of fund capitalisation should be based on the resources needed to finance its obligations, which is a function of insurance risk, and other maintenance expenses. One of the more common approaches has been to set a target range for the fund's reserves in relation to covered deposits, and to then maintain the ratio within that range over time. In order to keep the actual ratio within range the insurer could change the assessment rate periodically, or cease charging premia altogether. Because they are “capitalised” *ex ante* funds can enhance the credibility of a DIS by demonstrating that they have funds available to handle bank crises<sup>22</sup>. Having a reasonable sized fund on hand could enable the DIS to deal with smaller cases rapidly and without the inconvenience of drawing on the Exchange Fund.

**Ex post funding** – The use of *ex post* funding implies the cost of insurance will be met on an ‘as-needed’ basis through *ex post* premium assessments on banks, with any liquidity requirements being met from external sources when there is a need to pay depositors. Since no funds are collected upfront an *ex post* funding approach is entirely dependent on the availability of potentially large amounts of external financing to respond to crises and pay depositors rapidly. It eliminates the need to predict losses and to manage funds that may never get called. However, it also raises the prospect of practical problems in asking banks to fund the costs of depositor protection at the very time that they may be least able to do so, particularly during a financial crisis. The UK's Deposit Protection Board is a good example of an *ex post* system. It is a small initial fund supplemented by subsequent calls on banks for additional funds once the scale of loss becomes apparent.

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<sup>21</sup> The cost would also include the financing costs of any liquidity supplied by the Exchange Fund and the costs of administration of the payout. It is arguable that the latter represents a direct cost in any liquidation of the bank, and almost certainly is so when carried out by the liquidator. In that event they would be met as a cost of the liquidation. The financing costs issue has been addressed in **Section 7**.

<sup>22</sup> That assertion only applies to the fund either being unquestionably large enough to deal with any failure that occurs, or the availability of additional finance to bridge the short term requirements of paying depositors. (The FDIC is an example of where held funds are so large that they are perceived to be able to cater with both financing and shortfall requirements in the majority of cases likely to occur).

For reference, the important features of each funding approach are listed below:

**Table 2: Key Differences Between Funding Approaches**

| <i>Ex ante</i>  | <i>Ex post</i>  |
|---|---|
| ▪ Premia levied on a periodic basis   | ▪ Assessment only levied in the event of a collapse           |
| ▪ Premia are based on projections and judgement of costs                                | ▪ Assessments based on actual costs incurred                  |
| ▪ Forms the basis of a publicly visible and readily useable fund                        | ▪ No investment management required                           |
| ▪ Fund size determines whether external back-stop liquidity support is required or used | ▪ Always requires external liquidity support                  |
| ▪ Matches benefits of insurance with the cost of insurance                              | ▪ Bank that collapses may not end up paying for its insurance |

The bank interview round showed a strong preference amongst bankers for *ex ante* funding over *ex post* funding. This was based on the expectation that an *ex ante* approach will provide “certainty” of cost by limiting their exposure to the amount of the premium assessment; whereas, an *ex post* fund may create a contingent liability for which magnitude, availability of liquidity and accounting treatment will be uncertain.

The use of these two approaches in practice can tend to blur, since *ex post* systems often rely on some element of *ex ante* funding to meet routine administration costs. More significantly, any *ex ante* system that does not pass on some degree of shortfall risk to Government has to rely on *ex post* measures to cover a shortfall that reduces its funding below a sustainable level. These measures may consist of special assessments or increased premia in future periods rather than immediate payments, but none the less constitute an *ex post* recovery of costs from the banks<sup>23</sup>.

From the point of view of the DIS, the choice of one approach over the other, or a mixed solution is typically driven primarily by the:

- Predictability and magnitude of expected DIS costs;
- Need for availability of liquidity to allow the DIS to make timely payouts; and
- Relative impact on the DIS’s credibility.

<sup>23</sup> Canada’s CDIC approach for example is a compromise between *ex post* and *ex ante*. It has a relatively modest *ex ante* fund backed by a guaranteed line of credit from government to address both liquidity and shortfall risk, with any consequent dilution of the fund being caught up by increased premia in future periods.



## 6.2 Funding Options

The details of funding structure are a matter outside the scope of this report, and are best dealt with following consultation with the banking industry in the implementation phase. However, what is clear from the results of the study is that the funding approach should seek to strike a balance between the banks' concerns over minimising the unpredictable financial impact of DIS costs and the requirements of the DIS for ready availability of funds and credibility.

Three options are set out below that may be considered as the basis for a funding approach. The options do not constitute a comprehensive list of the possible approaches, but are intended to stimulate discussion on possible design features.

### 6.2.1 Ex ante funding with top up assessment cap

Under this approach banks would be required to pay an annual premium as determined by the DIS based on its future expected operating expenses, insurance losses, and financing costs on any funds borrowed from the Government in the course of advancing funds to depositors<sup>24</sup>. The annual premium would be set to reflect a reasonable expectation of DIS cost over time. In the event reserves became depleted by losses, the DIS would be able to make top up assessments, usually through an increase in premium, to restore the size of the fund to an adequate level. To differentiate between the uses of funds paid to a DIS, therefore it is important to draw a distinction between different components of the premium as follows:

|                             |  |
|-----------------------------|--|
| <b>Operating charges</b>    | Used to meet the incidental and routine costs of a DIS <sup>25</sup> ;   |
| <b>Pure insurance costs</b> | Used to build a core fund at a predetermined level to cover insurance losses and financing costs associated with the payout of depositors. |
| <b>“Top-up” assessments</b> | Used to restore the core fund if losses reduce the fund below a level the DIS considers adequate.  |

The requirement for banks to bear the full cost of the DIS is consistent with the assumption that Government will not countenance the use of public funds to defray the costs of deposit insurance in a non-systemic crisis. However, given the nature of deposit insurance and the inability to predict precisely what the costs will be, consideration should be given to place a *cap* on the amount of the annual premium that can be charged to banks in any one year. Charges made would be based on the actual requirements of the DIS to cover current or future losses, but could not exceed the cap. This would smooth the cost of the DIS to the banks and limit the extent of any contingent liability that might be associated with the obligation to pay top up assessments. There are no standard methodologies for setting a premium cap, but it should represent the absolute maximum amount that a DIS is legally able to charge a bank in a single year, and if reached it should not exacerbate a crisis by imposing an onerous financial burden on banks.

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<sup>24</sup> The funding obligation could be contained within primary legislation, or established by the MA as a precondition for banking authorisation.

<sup>25</sup> If the DIS is merely a small division of the MA, these may not be significant.



Unless measures to cap cost are carefully defined, banks theoretically meet even systemic costs through contributions over a longer period. One method of avoiding this problem would be to set an absolute cap on premia other than operating costs. This is similar to the approach used in the UK where the maximum contribution that can be levied, including top up assessments, is 30 basis points, although the limit can be varied by a Treasury order approved by Parliament. Applying a similar principle to Hong Kong would imply that any variation to the cap would have to be approved by the Legislative Council, providing additional protection to the banks.

### **6.2.2 Ex ante funding with minimal cash flow impact on banks**

One of the possible disadvantages to an *ex ante* fund stems from the reality that banks are likely to have a higher opportunity cost of capital than the DIS. If banks pay premia up front, they will lose the earning power of the funds. Even if the DIS utilises the investment income from those funds to defray the cost of subsequent premia, the return enjoyed by the banks in reduced premia is likely to be at a lower rate of return than banks can earn on the funds in question.

To reduce the opportunity cost of capital problem, the use of an “accrual” option for insurance premia may be considered. Under this method, a bank would be allowed to accrue for the insurance premium expense, deferring payments to the DIS until they are called following a bank collapse. Funds may be called by the DIS at any time. The bank would charge the premium to the profit and loss account, and establish a corresponding deferred liability on the balance sheet. In addition, a disclosure note to indicate the possible liability for top up contributions would be appropriate, although this could be qualified by reference to any maximum contribution. The deferred liability would become a reserve against future DIS losses. The distinguishing feature of the accrual option is that it leaves the ongoing investment of cash funds corresponding to DIS premia in the hands of the banks, while ensuring that the banks recognise the periodic costs associated with the insurance.

The accrual and deferred payment of insurance premia would not apply to DIS operating charges, however. Banks would still be required to pay their proportionate share of DIS operating costs, although they are likely to be relatively small. Further, any top-up contributions would be payable immediately on call by the DIS, representing an exceptional charge to the banks’ profit and loss account.

### **6.2.3 Ex post funding with collateral**

Potential arguments against the use of an *ex post* fund include the moral argument that a failed bank may not contribute to the cost of its failure, and the delays and potential difficulties in obtaining rapid settlement of contributions from funding banks after a collapse. The “collateral method” is an *ex post* approach that partially addresses the above issues.

Under this approach the pure insurance loss component of the premium is not charged unless there is a DIS loss (operating charges would still be assessed). Instead

each bank places a sum on deposit with the DIS as a partial surety<sup>26</sup> for the bank's obligations to contribute to the costs of deposit protection. The bank would hold the collateral as an asset on its balance sheet until such time as it was charged as a premium by the DIS. It would disclose a contingent liability for its potential premium obligations.

The DIS would place the funds in an account with the Exchange Fund. The value of the deposit would be equivalent to a target reserve level determined by the DIS based on its expectations of risk and loss. As the fund is only collateral, interest income on the deposited funds would be refunded by the DIS to the banks, but this would be limited to the interest received from the Exchange Fund rather than a market rate of interest. If a failure were to occur, the DIS would utilise the funds immediately for deposit payouts, and banks would be charged a top up assessment equal to the actual loss incurred by the DIS. Any recovery of funds from the resolution of failed banks would be used to replenish the fund, with any excess over the target level being returned pro rata to the funding banks. At the end of each year banks would be required to place additional funds on deposit with the DIS up to the amount necessary to replenish the fund to the target level. Deposits may be suspended once the fund has reached a target level.

Note that the failed bank effectively contributes to the cost of the scheme, as the collateral placed by the failed bank is directly available to the DIS. The DIS exercises its rights of set off for premia against the collateral held. The use of the collateral fund also enables the DIS to resolve small bank failures without having to call upon liquidity support from the Exchange Fund, and minimises any financing cost and liquidity problems consequent upon any delays in settlement of the *ex post* premia.

#### **6.2.4 Option variations**

The main differentiating factors between the options presented above are the timing of expense recognition, cash flow impact, and collateral aspects of premium assessment. A compromise approach between among them can be found by varying either of these aspects. For example, the accrual fund could be used, but the DIS may have the right to request security for accrued premia from individual banks if it considered it appropriate. Alternatively, the collateral approach could be used, but banks might be required to recognise some element of the future cost in current periods by making an appropriate provision.

The options set out above are only illustrative. The specific nature of the funding option chosen will be dependent on consultation with the banking industry in the implementation phase.

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<sup>26</sup> Partial in so far as this would not address the topping up requirement for claims on the DIS in excess of the computed "fighting fund".

## 6.3 Indicative DIS Premia

An understanding of the likely costs of a DIS is useful, as this may directly impact its acceptance by the banking community, and the extent to which charges might be passed onto depositors and the public. It is also helpful in comparing the relative costs of different levels of coverage the DIS could offer. A modelling exercise to predict indicative premia was carried out, taking into account the structure of the Hong Kong banking market, the underlying preferential claim system, and a range of assumptions on failure risk and possible asset recoveries from bank failures. The approach used in this study to calculate indicative premia for deposit insurance is consistent with the conceptual basis commonly applied elsewhere in the world. That is, the design is an attempt to estimate the demands that a DIS fund may be expected to cover.

While there is no uniformly accepted methodology for estimating future demands on a DIS, estimates are sometimes based on a regression analysis of bank failures. Where there have not been a sufficient number of recent failures to give validity to a regression analysis for prediction, as in Hong Kong, such an approach is not appropriate. In this situation the authorities in many countries rely on judgement to set the premia of their fund. As an alternative, this study utilised an innovative application of Monte Carlo simulation techniques<sup>27</sup> to provide a more quantitative approach to model the potential risks facing the DIS and the likely financial demands that could be placed on it.

### 6.3.1 Model design

The DIS seeks to price insurance to meet expected claims. To do so it must consider a wide range of factors indicating both the risk profile of banks and potential shortfall losses incurred by the DIS given one or more bank failures at any point in time in an economic cycle. These factors bear on three variables, which are inextricably linked in the estimation of cost.

***Risk of failure*** – or the frequency of bank failures occurring in a stated period, which is a function of the risk profile of individual banks and the network of risk linkages among banks. In the absence of detailed data on individual bank risk, and any consistent history of bank failures in Hong Kong, conservative assumptions have been made as to failure risk for broad groups of banks.

***Expected shortfall loss*** – is the difference between the amount expected to be paid out by the DIS if a bank were to fail and the amount expected to be recovered on bank assets after liquidation or final resolution. The track record in Hong Kong is one of minimal or zero shortfall to depositors at all, let alone to the preferential creditors. This is consistent with the nature of bank assets, and the strength of the regulatory system. None the less, to provide a conservative estimate a variety of expected shortfall losses have been assumed, which were calculated by a formula using asset recovery assumptions of 10%, 50%, and 70% within a statistical distribution.

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<sup>27</sup> A modelling approach that generates a statistical distribution of possible outcomes by using repeated recalculation, each time using randomly selected combinations of input variables.

**Financing costs** – the net interest cost of borrowing funds, or the opportunity cost of capital, arising from timing differences between cash advances to covered depositors and cash recoveries from bank resolution. As noted in **Financing in Section 7** there is likely to be a significant requirement to borrow funds, and even with the highly liquid assets held by the banks the size of the funding requirement can make the financing cost significant in absolute terms. As the financing is dependent on a wide range of additional variables, further complexity is added to the model. A separate modelling exercise looking at a variety of possibilities for the timing of payouts and recoveries over 12 months<sup>28</sup>, and using a presumed borrowing rate of 8%, was conducted. Using these assumptions total financing costs varied between 1.5% and 5% of covered deposits.

These variables determine the size of any loss for a DIS in insuring a portfolio of covered deposits. While there is considerable variation in the detail of approaches taken to evaluate these variables, they are the key drivers for calculating the pure insurance financing requirements of DISs in a number of other jurisdictions.

Given the dynamic nature of the premium-dependent variables and their potential variation among the banks in Hong Kong, a simulation technique was developed around the above variables for computation of DIS premia. This technique allowed the calculation of a very wide range and large number of potential outcomes for a DIS, based on defined statistical distributions of the key variables for each of the 153 licensed banks. The outcomes were in turn used to compute a range of premia that would be needed to cover the expected shortfall and financing costs associated with the failure of one or a combination of banks in any one period. It was also possible to observe the estimated frequency distribution of possible future outcomes for a DIS given a range of assumptions of risk. This shed light on the extreme upper and lower bounds of risk associated with a large combination of events. This is somewhat consistent with an actuarial approach of an insurer. It allows observation of a distribution of possible losses across a pool of policies when the future occurrence of some loss was expected, but could not be ascribed *ex ante* to any particular policyholder.

Calculations were made under two “risk” scenarios summarised as follows:

**Risk Scenario A** – Represented a reasonably conservative scenario, where banks having some degree of inherent financial weakness were assigned a failure rate of 1-in-20 and all other banks were assigned a rate of 1-in-200. Financing costs, totalling 3 percent of covered deposits, were based on cash recovery to the DIS, less any shortfall, within 12 months of failure.

**Risk Scenario B** – Represented a more conservative scenario, where banks having some degree of inherent financial weakness were assigned a failure rate of 1-in-10

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<sup>28</sup> These assumed that recoveries would be completed within 12 months. Whilst this may appear optimistic for a formal liquidation, under the anticipated system the recovery is made under a preferential claim. Payments to preferential creditors are possible in a far quicker time span than ordinary creditors, particularly where there is a high proportion of liquid assets, as in a bank. Even in the BCCHK case, where small depositors only ranked as ordinary creditors, all depositors with a balance of HK\$100,000 or lower were settled within 14 months of the bank’s closure. Moreover, under the anticipated financing arrangements the DIS could raise additional contributions from banks to address any shortfall by the end of the 12-month period.

and all other banks were assigned a rate of 1-in-100. Financing costs, totalling 5 percent of covered deposits, were based on a recovery period within 12 months of failure, but at a moderately slower rate than in Scenario A.

Calculation of indicative costs and premia were based on the estimated amount of coverage corresponding to a coverage cap of HK\$100,000, as under existing protection arrangements, and a cap of HK\$200,000. Premia were calculated in proportion to covered deposits consistent with the recommendations set forth in **Section 7** on premium assessment.

The results of the preliminary simulation analysis based on the above assumptions were as follows for each indicative coverage cap.

**Table 3 : Summary Results of Calculations for Indicative DIS Premia<sup>29</sup>**

|  | Risk Scenario "A" |                         | Risk Scenario "B" |                         |
|--|-------------------|-------------------------|-------------------|-------------------------|
|  | Mean Value        | 95% Confidence Interval | Mean Value        | 95% Confidence Interval |
| <b>COVERAGE CAP @ HK\$ 100,000</b>       |                   |                         |                   |                         |
| Required Premium (% of Covered Deposits) | <b>0.036%</b>     | <b>0.104%</b>           | <b>0.115%</b>     | <b>0.300%</b>           |
| Expected DIS Cost (HK\$ 000's)           | 223,347           | 639,906                 | 713,219           | 1,856,028               |
| <b>COVERAGE CAP @ HK\$ 200,000</b>       |                   |                         |                   |                         |
| Required Premium (% of Covered Deposits) | <b>0.045%</b>     | <b>0.115%</b>           | <b>0.133%</b>     | <b>0.349%</b>           |
| Expected DIS Cost (HK\$ 000's)           | 401,452           | 1,023,205               | 1,184,386         | 3,114,173               |

These data indicate that under a coverage cap of HK\$100,000, an annual indicative premium of 3.6 basis points and 11.5 basis points, respectively, would be required to cover the *average* annual DIS loss observed over numerous iterations of Scenarios A and B. Under a coverage cap of HK\$200,000, the indicative premia would be 4.5 basis points and 13.3 basis points under each respective scenario.

From a statistical perspective, if the assumptions were to hold true, these premia would be sufficient to cover the *average* expected loss to an insurance fund in any one year. In effect, they approximate the midpoint in the distribution of simulation results. However, in covering only the average of potential outcomes the results in practice could be better or worse in any single year. The average annual expected loss associated under Scenarios A and B for a coverage cap of HK\$100,000, is HK\$223 million and HK\$713 million, respectively. Under a coverage cap of HK\$200,000, the expected average annual loss is HK\$401 million and HK\$1.18 billion, for each respective scenario.

For reasons of credibility and solvency it will be necessary for a DIS to have sufficient resources to cover more than just the average possible outcome in any one

<sup>29</sup> Although the modelling exercise was based on a conservative set of assumptions, the results should only be considered preliminary. The ultimate structure and design of the DIS and the risk aversion of the sponsor will significantly affect where in the spectrum of possible outcomes premiums should be set. A more comprehensive premium computation should be carried out once the design and introduction of a DIS are agreed. This would provide a more precise result based on a detailed analysis of the risk profile of individual banks and the value of exposure at the time of DIS inception.

year. Resources should be sufficient to cover the significant majority of all possible outcomes over a range corresponding to a high statistical confidence interval<sup>30</sup>. This ensures a level of capital robustness, and should allow the DIS to meet both its expected obligations and any material year-on-year variation in those obligations since bank failures are difficult to predict and often sporadic.

Drawing from a statistical distribution of the simulation results, indicative premia corresponding to a 95 percent confidence interval were designated as the “high confidence” values. At this level, there was a fairly high degree of certainty that the indicated premium would be sufficient to cover almost any likely outcome given the stated assumptions. The results presented above show that the indicative premium under a coverage cap of HK\$100,000 would have to be 10 basis points and 30 basis points for Scenarios A and B, respectively, to cover up to 95% of the potential outcomes that may occur in any one year. Under a coverage cap of HK\$200,000, the indicative required premium is higher by about 10% for Scenario A and 16% for Scenario B.

### 6.3.2 Conclusions

Using the results as a preliminary indication of the risk facing a DIS, it is not unreasonable to expect that a premium of **10 basis points** could serve as a satisfactory annual premium for a DIS with a HK\$100,000 cap, at least initially. This is consistent with a 95% confidence interval for the results of Scenario A, which could be considered a conservative scenario on which to base an expectation of maximum potential annual loss in the near-term. Given the uncertainties surrounding the actual cost of funding, it would be appropriate to set initial premium levels at a prudent level. To the extent the funds were not actually required, this rate would also allow for the build-up of reserves over a three year period that would be adequate to cover the majority of outcomes indicated by the 95% confidence interval for the more conservative Scenario B<sup>31</sup>. Any premium charged should be reviewed annually, taking into account revised risk and financing costs, as well as the size of reserves held. The annual premium could be reduced, or even suspended, once reserves held are deemed sufficient by the DIS to provide an adequate level of comfort that the fund can address the most likely range of loss requirements.<sup>32</sup>

There are a number of general observations that can be drawn from this exercise about the possible costs and risks facing a DIS in Hong Kong that could influence its acceptance and design.

***Potentially modest cost*** - An analysis carried out by the MA on 31 locally incorporated banks indicated that a 10 basis point premium would have a net interest margin impact of less than 2 basis points in all but 2 cases, and in no case did the impact exceed 2.4 basis points. The results seem to suggest that the cost of having a DIS could be relatively modest in relation to premium levels and shortfalls assumed

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<sup>30</sup> Not just costs, but financing requirements – see discussion in **Financing** in Section 7.

<sup>31</sup> Assuming there was no call on the funds or material change in the risk profile of the banking industry in the three year period.

<sup>32</sup> This would not address routine administration and running costs, which may have to be separately charged. However, annual premia to cover such costs are likely to be immaterial in relation to covered deposits.

in other countries<sup>33</sup>. Premia in the ranges indicated are at the low end of those observed in other jurisdictions, especially when assessed on only covered deposits. The range is wide with premia on total deposits ranging in excess of 100 basis points in some jurisdictions.

***Meets expectations of the banking industry*** – The majority of banks interviewed indicated that the level at which the benefits of a DIS would break even with cost was between 10 and 20 basis points<sup>34</sup>. A scheme charging a premium of 10 basis points or less, and potentially discontinuing or reducing the premium after a sufficient “core fund” had been assembled, would appear to add value to these banks. However, the responses varied significantly by institution and were made in the absence of any specified funding model. A wider consultation exercise once details of the proposed DIS model funding have been finalised would provide more detailed feedback on the expectations of the banking industry.

***High sensitivity to changes in variables*** - Despite the relatively low implied cost, the marked difference in results between the two scenarios highlights the degree of sensitivity and risk associated with changes in the key pricing variables. This underscores the need to be conservative in premium assessment and to consider the wider range of potential outcomes in the establishment of target DIS reserves over a period of time. This is indicated by the use of a 95% confidence interval in either scenario, but it also underscores the need to ensure that the pricing variables are routinely reviewed, assessed for reasonableness, and tested against experience.

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<sup>33</sup> The preferential claim system in Hong Kong affords substantial advantages in lowering DIS shortfall risk in comparison to countries without such a system.

<sup>34</sup> Note however that for three of the surveyed banks opposition to introduction of a DIS was reflected in their views on break even cost. They believed the benefits were exceeded by the costs even with a zero premium.

## **7. GENERIC DESIGN FEATURES**

In setting up a DIS, there are a number of generic design elements to take into consideration, which define its character and scope of operation. These most common elements are as follows:

- Type of Banks Covered
- Form of Participation
- Coverage Approach
- Coverage Cap
- Basis of Coverage Calculation
- Netting and Exclusions
- Method of Premium Assessment
- Financing

For ease of reference Table 4 summarises the generic DIS design elements overleaf.



**Table 4: Summary of Design Variable Options and Preliminary Recommendations**

| <b>Design Feature</b>  | <b>Options</b>   | <b>Recommendation</b>                                 | <b>Fit with DPS Design Criteria</b>  |
|--|--|---|--|
| <b>Type of Banks Covered</b>   | <input type="checkbox"/> All financial intermediaries<br><input type="checkbox"/> Only fully licensed banks  | Fully licensed banks                                  | <input checked="" type="checkbox"/> Deposit protection (covers the population of small depositors)   |
| <b>Form of Participation</b>   | <input type="checkbox"/> Voluntary<br><input type="checkbox"/> Compulsory  | Compulsory  | <input checked="" type="checkbox"/> Terms of coverage must be clear and consistent<br><input checked="" type="checkbox"/> Maximise risk diversification  |
| <b>Coverage Approach</b>   | <input type="checkbox"/> Full Coverage<br><input type="checkbox"/> Limited Coverage<br><input type="checkbox"/> Discretionary Coverage   | Limited   | <input checked="" type="checkbox"/> Strike a balance between covered and uncovered deposits<br><input checked="" type="checkbox"/> Limit losses to the DIS and costs to the banks<br><input checked="" type="checkbox"/> Minimise risk-seeking incentives for banks                          |
| <b>Coverage Cap</b>  | <input type="checkbox"/> Maintain at current level<br><input type="checkbox"/> Reset above HK\$100,000   | HK\$100,000 with discretion for periodic adjustments. | <input checked="" type="checkbox"/> Protection for <u>small</u> depositors<br><input checked="" type="checkbox"/> Minimise weakening impact on market discipline   |
| <b>Basis of Coverage Calculation</b><br><br><i>Account or Depositor Basis</i><br><br><i>Multi-beneficiary Accounts</i> | <input type="checkbox"/> By account<br><input type="checkbox"/> By depositor<br><input type="checkbox"/> Full exclusion by account<br><input type="checkbox"/> Full inclusion by beneficiary<br><input type="checkbox"/> Mixed | By depositor<br><br>Mixed (See description below)     | <input checked="" type="checkbox"/> Protection for small depositors<br><input checked="" type="checkbox"/> Minimise distortions<br><input checked="" type="checkbox"/> Terms of coverage must be clear and consistent<br><input checked="" type="checkbox"/> Protection for small depositors |

| Design Feature                      | Options   | Recommendation   | Fit with DPS Design Criteria  |
|-------------------------------------|---|--|---|
| <b>Netting and Exclusions</b>       |   |  |   |
| <i>Extent of Netting</i>            | <input type="checkbox"/> Do not net<br><input type="checkbox"/> Net accounts in arrears or near-term due<br><input type="checkbox"/> Net all outstanding claims | DIS discretion whether to apply at all, but can only be applied against: <ul style="list-style-type: none"> <li>overdrafts,</li> <li>arrears on personal loans,</li> <li>currently due obligations under guarantees given by the depositors; and</li> <li>contractually past due sums</li> </ul> | ✓ Speed of payment<br>✓ Terms of coverage must be clear and consistent  |
| <i>Excluded Accounts</i>            | <input type="checkbox"/> Various options  | Categories currently excluded from a priority claim, plus: <ul style="list-style-type: none"> <li>Deposits booked in foreign branches of Hong Kong banks</li> <li>Deposits pledged as security</li> </ul>  | ✓ Speed of payment<br>✓ Terms of coverage must be clear and consistent<br>✓ Consistency with the existing legal framework |
| <i>Co-insurance</i>                 | <input type="checkbox"/> Yes<br><input type="checkbox"/> No   | No   | ✓ Protection for small depositors   |
| <b>Method of Premium Assessment</b> |   |  |   |
| <i>Assessment Base</i>              | <input type="checkbox"/> Total deposits<br><input type="checkbox"/> Covered deposits  | Covered deposits   | ✓ Minimise moral hazard on banks and distortions in general<br>✓ Equitable treatment of banks                             |
| <i>Fixed or Risk-based</i>          | <input type="checkbox"/> Fixed percentage<br><input type="checkbox"/> Risk-based  | Fixed rate percentage for inception  |   |
| <b>Financing</b>                    | <input type="checkbox"/> Sufficiently large <i>ex ante</i> fund to meet any requirement<br><input type="checkbox"/> Credible source of borrowed funds           | <ul style="list-style-type: none"> <li>Utilise Exchange Fund to provide short term liquidity</li> <li>Costs of borrowing to be met by DIS</li> </ul>   | ✓ Demonstrate adequate financial funding and/or reserves from a highly rated source.                                      |

## **7.1 Type of Banks Covered**

As a general rule the type of institutions covered under a DIS should be driven by the scope of the intended impact, the objectives of the scheme sponsor, and the structure of the banking system. There are also policy implications associated with the broad inclusion of various institutions or the limited inclusion of only certain deposit-taking institutions.

Under present arrangements in Hong Kong, preferential claim status only extends to deposits with fully licensed banks. Deposits held by deposit-taking institutions (“DTCs”) and restricted license banks (“RLBs”) are not protected. This exclusion does not appear to have a significant effect on the financial services sector. The value of deposits held by DTCs and RLBs is small and their funding practices are essentially extraneous to the retail bank sector in any event.

Unless it is the intention to expand protection to depositors of DTCs, RLBs or any other financial services companies, it is unnecessary to interfere with the status quo in this respect if a formal DIS is adopted. Nevertheless, it will be necessary to explicitly indicate which types of institutions are covered to ensure absolute clarity to small depositors. It will also be very important to police any excluded institutions to ensure they do not misrepresent themselves as insured institutions.

To the extent that the DIS remained silent on the distinction between licensed banks and other institutions, all the while intending to exclude certain type of institutions, the small depositors might become confused or vulnerable to exploitation by otherwise uncovered institutions. Both of these consequences could undermine the entire credibility of a DIS, which is of foremost importance for its effectiveness.

## **7.2 Form of Participation**

The decision of whether to make deposit insurance a voluntary or compulsory requirement is determined by both its sponsorship and intended impact on the system.

Voluntary systems tend to be either private systems, such as in Switzerland, or systems where the funding for deposit insurance has been transferred to the insured banks themselves. The two key arguments in favour of a voluntary system are that it reduces the need for Government intervention and offers a more free market oriented solution for the financial system in general. However, voluntary systems are rare.

The main reason for this is that a voluntary system bears several disadvantages that either undermine the intended impact of deposit insurance or make the insurance scheme inherently unstable. First, by its very nature a voluntary system will not universally protect small depositors. In Hong Kong, where information about the risk of specific banks is not easily accessible by the general public, this could lead to losses by poorly informed depositors and thus weaken confidence in the system generally. Second, it can exacerbate banking instability as depositors of uninsured banks transfer their funds to insured banks during impending crises. This makes uninsured banks more vulnerable to runs, which makes them more reliant on the

lender of last resort. Finally, there is an adverse selection problem. Under a private or government-run scheme, a voluntary system will have the problem that its membership could constitute the riskier banks seeking to transfer their inherent risk to a third party.

A variation on the voluntary system would be to allow depositors to make the choice of whether their deposit is insured or not. Under such an arrangement, banks would be required to offer third-party insurance coverage to depositors as an option. Banks could offer protected and unprotected deposits with different interest rates, with the differential equivalent to the insurance premium<sup>35</sup>. While this variation is an interesting alternative to a compulsory bank - membership scheme and gives depositors the freedom of choice, it is not consistent with the primary objectives for having a DIS in Hong Kong - depositor protection and system stability. The fact that depositors make a rational decision at the point they choose not to take insurance will not prevent them suffering a loss if the bank collapses, or having the propensity to run to protect their interests when a bank appears under threat.

Even if depositors do not withdraw funds from the bank in question, they may switch at the last minute from uninsured to insured deposits at the same bank. There is therefore the potential for them to enjoy the interest premium on unsecured deposits over the longer term, whilst practically enjoying the same degree of cover that depositors who had always maintained insured deposits receive. Quite apart from the issue of equitable treatment between depositors, switching behaviour of this sort could significantly distort the funding of the DIS, as premium income would not be directly connected to payout requirements. In fact the premium calculation becomes inherently unstable. A larger insurance premium is required to cover not only those depositors who consistently maintain secured deposits, but additional depositors who join the insured class and benefit from the cover without having “fully paid up” their premia. However, the larger the differential between the interest rates paid on insured and uninsured deposits, the greater the incentive for depositors to switch deposits at the last minute. Whilst restrictions on switching deposit type, or minimum qualification periods before insurance is effective, can counter such behaviour, they add an additional complication to the transparency and ease of administration of the DIS.

Given the primary objective of providing small depositors protection and conditions in the Hong Kong banking system, the above considerations make a strong argument for having a compulsory system. This is also consistent with widely held best practice by most deposit insurance practitioners and has been cited as an important requirement for credibility by the FSF Working Group Study as well as the European Union Directive of 1994.

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<sup>35</sup> Alternatively, the insurance premium could be passed-through directly to the DIS, which becomes a third party to the deposit contract.

### 7.3 Coverage Approach

The total value of covered deposits<sup>36</sup> has relevance for DIS design in two ways. First, it is a function of several design elements, such as the coverage cap and the types of deposits to be covered. These design elements must be fashioned to ensure that the amount of coverage is adequate to meet the stated primary objectives and not so large as to encourage moral hazard. In this regard, the cap has to cover a sufficient number of deposits to avoid major bank runs by retail customers, but without eliminating the beneficial impact of market discipline on banks. Second, it determines the level of contingent liability to the insurer and ultimately the costs of the DIS. This in turn influences the determination of other design elements that impact how the DIS is financed, operated, and safeguarded against excessive risk.

There are generally three types of coverage arrangements for application that could be considered. These are *full coverage*, *limited coverage*, and *discretionary coverage*. Under a full coverage scheme all depositors are fully insured and there is no need to make a distinction between explicit coverage and implicit coverage. Limited coverage schemes provide a maximum level of protection up to the stated coverage cap, but no more. Under a discretionary coverage scheme the insurer is obligated to cover all deposits at or under the coverage cap, but is authorised under certain circumstances to extend de facto coverage to uninsured depositors by whatever means it feels is appropriate. Generally, the protection of uninsured deposits would be triggered in a systemic crisis or when loss of confidence might result in widespread bank runs.

Extending explicit full coverage to all depositors seems highly undesirable in Hong Kong. The contingent liability to the Government would be high, which is contrary to the secondary objective. Moreover, the potential moral hazard effect could undermine market discipline, and encourage banks to take on too much risk in the face of limited acceptable investment opportunities. This leaves limited coverage and discretionary coverage as viable options for consideration.

Discretionary coverage provides wide latitude to the insurer to vary coverage at times when runs by uninsured depositors are expected to have a material impact on the system. In Hong Kong, where between 20 and 30 percent of all deposits by value are likely to be fully covered at anticipated coverage levels and where interbank funding accounts for a relatively large portion of bank funding, discretionary coverage could serve as an important mechanism for maintaining system stability. In achieving this advantage the lack of absolute certainty over the limit of cover does undermine the benefits to be gained from clarity of cover. Further, it attempts to gain the advantages of implicit coverage in an explicit system, which could make the scheme costly and inconsistent in the treatment of banks. All of these effects are counter to the principles cited as important for effective design.

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<sup>36</sup> Note that for the purposes of this study covered deposits are defined as the value of all accounts below the deposit protection cap, plus the insured element of those deposits above the cap. e.g. two deposits, one of HK\$200,000 and one of HK\$100,000, would both receive a payout of HK\$100,000 if a HK\$100,000 cover cap were in force. While an absolute cap is also possible, so that a deposit in excess of the cap receives no protection at all, these lead to inequities of treatment between depositors of comparable size and are therefore ignored.

Limited explicit coverage increases cost certainty of insurance because the coverage is measurable. It is generally effective in protecting small depositors and, depending on the amount of explicit protection provided, can be very effective in preserving market discipline, which is very important for the competitive strength of Hong Kong's financial system.

## **7.4 Coverage Cap**

Most deposit insurance schemes set a cap on the amount of compensation that can be given to a single depositor. The establishment of such a limit is usually a matter of judgement based on the unique circumstances existing in the particular market and the policy objectives of the Government and/or the sponsors of the insurance scheme in balancing cost against scale of coverage.

Drawing from international benchmarks, it is a generally held view among practitioners that the coverage cap should fully cover the vast majority of depositors; up to 90% by volume, and at least 20% of the value of customer deposits. Another common benchmark is the average coverage as a proportion of Gross Domestic Product (GDP). In this regard international comparisons show a huge range in coverage, but a multiple of one to two times per capita GDP has become a common benchmark for a desirable target. In Hong Kong this would equate to a cap of approximately HK\$200,000 to HK\$400,000.

In determining the appropriate coverage in light of these benchmarks, the MA carried out a survey of deposit data covering Hong Kong and foreign incorporated banks holding the majority of total customer deposits. Drawing from this survey and using Call Report Data, the total amount of full and partial coverage that a DIS would achieve at different coverage caps was estimated for all 153 licensed banks<sup>37</sup> as at 31 December 1999. These estimations are shown below for coverage caps of HK\$100,000 and HK\$200,000.

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<sup>37</sup> This is not a statistically valid extrapolation, but given that the original sample covered 76% of the population the results are informative.

**Table 5: Estimated Value of Fully and Partially Covered Deposits by Gross Balance<sup>38</sup>**

|  | COVERAGE CAP HK\$ 100,000           |                                |  | COVERAGE CAP HK\$ 200,000           |                                |  |
|--|-------------------------------------|--------------------------------|--|-------------------------------------|--------------------------------|--|
|  | Amount of Full and Partial Coverage | Cumulative Balance of Coverage | Cumulative Coverage as % of Total Deposits | Amount of Full and Partial Coverage | Cumulative Balance of Coverage | Cumulative Coverage as % of Total Deposits |
| <i>Deposits with HK\$ Balances of</i>        | (HK\$ 000's)                        |                                |  | (HK\$ 000's)                        |                                |  |
| <b>\$100,000 or less</b>                     | 262,303,873                         | 262,303,873                    | 8%   | 262,303,873                         | 262,303,873                    | 8%   |
| <b>\$100,001 to \$200,000</b>                | 142,096,883                         | 404,400,756                    | 13%  | 202,703,260                         | 465,007,133                    | 15%  |
| <b>\$200,001 to \$300,000</b>                | 66,967,091                          | 471,367,847                    | 15%  | 133,934,182                         | 598,941,315                    | 19%  |
| <b>\$300,001 to \$400,000</b>                | 35,291,926                          | 506,659,773                    | 16%  | 70,583,852                          | 669,525,166                    | 21%  |
| <b>\$400,001 to \$500,000</b>                | 21,255,072                          | 527,914,845                    | 17%  | 42,510,144                          | 712,035,310                    | 23%  |
| <b>\$500,000 +</b>                           | 90,607,655                          | 618,522,500                    | 20%  | 181,215,311                         | 893,250,621                    | 28%  |
| <b>Fully Covered Depositors (% of total)</b> |                                     |                                | <b>84%</b>                                 |                                     |                                | <b>91%</b>                                 |

Assuming the survey results accurately mirror the total deposit population these data indicate the total value of deposits covered under caps of HK\$100,000 and HK\$200,000 is HK\$619 billion (20 percent of customer deposits) and HK\$893 billion (28 percent of customer deposits), respectively. A coverage cap of HK\$200,000 would meet the goal of covering 90% of depositors by volume and exceed the 20% by-value goal. Equally, cover at the HK\$100,000 mark would achieve the value goal, and cover an estimated 84% of depositors.

Although not shown in Table 5, the detailed survey data show that each successive HK\$100,000 of coverage beyond the HK\$200,000 mark adds a marginal amount of protection in terms of the additional proportion of total depositors and total funds covered. Under a coverage cap of HK\$300,000, the number of depositors receiving full coverage increases only about 3 percent to 94%. The vast proportion of the deposit value lies in accounts with balances in excess of HK\$500,000, but is estimated to be held by only 4% of account holders. However, every incremental increase in the coverage cap could be expected to result in an increase in the amount of expected losses and financing that would be required to sustain a credible DIS. This is due to the increase in financial exposure resulting from an increase in effective coverage, and in a broader sense the increased moral hazard risk that could result from the weakened market discipline on banks. The trade-off between incremental cost and benefit therefore needs to be balanced against the desire to achieve international benchmarks.

<sup>38</sup> The table shows the incremental and cumulative value of full and partially covered deposits according to gross balance, and the aggregate proportion of depositors that are fully covered under each coverage cap.

On balance, the use of a **HK\$100,000 coverage cap** for the inception of any DIS is recommended. The major reasons for this are as follows:

- It is justifiable by reference to the commonly accepted international benchmark on coverage by value and number of depositors. While it falls short of achieving the 90% coverage level for number of depositors receiving full cover, the shortfall is not material. In any event this represents a small compromise in relation to the trade-off with the absolute cost under a higher cap.
- In relation to the scale of cover it provides, its cost is estimated to be considerably less than under a HK\$200,000 coverage cap. As indicated in **Section 6**, the average shortfall loss under a HK\$100,000 coverage cap was up to 44% less than a HK\$200,000 coverage cap. By extension this cost differential associated with the current cap could substantially mitigate the impact of funding requirements on banks while having a relatively minor impact on the scope of cover.
- It is consistent with the current preferential claim limit that is already enshrined in law. It is familiar to depositors and fits within the current protection threshold.
- As a practical principle for the use of a nascent DIS, upward revisions to the cap are considerably easier and more consistent with maintaining confidence than a subsequent reduction. An increase could be justified by relevance to experience if desired at a later date.

While reliance on the one to two times per capita GDP benchmark would indicate the use of a higher coverage cap, it is important to recognise that the distribution of income in Hong Kong is highly skewed and that the *average* GDP per capita is not a realistic reflection of small depositor income<sup>39</sup>. Its application as a benchmark for setting a coverage cap in Hong Kong is very limited. Finally, the cap necessary to achieve the GDP benchmark does not seem to offer a substantially greater coverage of either value or volume. The premium costs and increased market distortion in a move from a HK\$100,000 to HK\$400,000 level may be significantly harder to justify in relation to the marginal benefits.

## 7.5 Basis of Coverage Calculation

### 7.5.1 Account or depositor basis

A key issue is the fundamental one of whether the DIS provides cover on an account or depositor basis. An account basis has the attraction of being easy to implement, since no difficulties arise as to the identification of depositor relationships across a number of accounts. An accounts based approach does not distinguish between those holding a variety of accounts for generally accepted purposes and those deliberately seeking to maximise cover. In doing so it largely (but not completely) avoids the

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<sup>39</sup> As reported in the Quarterly Report on General Household Survey, January to March 2000, the median family income in Hong Kong is HK\$223,200 p.a. This implies a per capita *median* annual income of only HK\$67,600, based on an average family size of 3.3 persons. On this basis, two-times the median income per capita would indicate a benchmark coverage cap of HK\$135,200.



somewhat complex debate over the parity of treatment when some depositors participate in a multi beneficiary deposit in addition to their own (a married couple each holding a personal account as well as a joint account being the classic example).

Where insurance is capped at less than 100% of deposits, an account basis approach also provides a positive incentive to depositors to split their accounts within the same institution. This increases DIS administrative cost and complexity to no real economic benefit, circumvents the intent of providing limited coverage, and erodes the practical benefit of having a cap in the first place. Further, it makes it more probable that depositors would receive different levels of cover, because the more astute depositor would split his accounts. This would run contrary to the generally accepted principle of *pari passu* treatment for creditors in the event of insolvency.

Coverage on a depositor rather than account basis is generally recognised as best practice. This recommendation is further reinforced by the results of the MA Deposit Data Survey, which revealed that scale of coverage on a depositor basis was not materially different from the scale of coverage on an account basis.

### 7.5.2 Multi-beneficiary accounts

Any scheme providing cover on a depositor basis has to consider how limitations on cover should apply to multi-beneficiary accounts such as joint accounts, trusts, partnerships etc.

There are three central policy issues in considering such accounts. First, the extent to which any single depositor will be insured to a different level of cover than the next depositor simply through the mechanism in which the account interests are held, rather than the underlying economic reality, will result in inequity. Second, it is necessary to fashion the terms of cover to avoid a distortion of account keeping behaviour – typically by account splitting – contrary to the interests of effectiveness and efficiency. Third, the simpler the system the easier it will be to compute cover for any given claim, enabling faster payout and minimising the chances of error.

### 7.5.3 Recommendations

Where coverage is by depositor, it is important to consider whether cover on multi beneficiary accounts should be treated separately from individual accounts held by the beneficiaries. In this respect, the scheme could treat multi-beneficiary accounts in a number of ways. Like many factors, ultimately the cover policy adopted is a policy decision largely influenced by the insurer's views on what constitutes equitable treatment for depositors, balanced by practical application. There are no “right” answers, or clear-cut best practice to follow. However, taking into account the overall DIS objectives and comparable international practice, on balance the following are recommended:

- **Joint Accounts** - For the purposes of determining cover the account balance is assumed to be equally split between the account holders, who will then have that allocation added to their other deposits. Their aggregate claim is capped at the overall claim limit. This ensures equality of treatment on a depositor basis, removes the incentive to create additional accounts to increase cover, and minimises computation difficulty.

- **Trust and Client Accounts** - Essentially mirror the UK practice. For active trusts, allow the trust to claim as an individual legal entity, separate from the trustees themselves, with payment made direct to the trustees for distribution under the terms of the trust. For bare trusts and client accounts, allow each beneficiary cover as an individual for whatever demonstrable entitlement the beneficiary has to the trust or client account. Such a claim is aggregated with the depositor's other claims in considering whether the total cover cap is reached. Although confirming the demonstrable entitlement may take time, the depositor is unlikely to have a pressing reliance on such accounts for everyday funding. Payments on such cover could be excluded from any rapid payment scheme, and require the filing of a claim. The claim may then be assessed in a reasonable timeframe, and may take into account any other claims already submitted by the same depositor in deciding whether the individual depositor cap had been reached.

## 7.6 Netting and Exclusions

Another important aspect in the coverage design of the DIS is the determination of which accounts should be excluded from cover, and whether categories of obligations by the depositor to the bank should be set off in determining the payment made to a depositor under the scheme.

The rationale for **excluding** certain accounts from cover is based on three basic principles:

- an effort to simplify the process of claims determination, and by extension enable rapid payment;
- a reduction in risk by reducing sums advanced; and
- a moral principle that certain categories of depositors should be ineligible for protection.

Netting for deposit insurance purposes means comparing the *net* obligation due to the depositor by the bank against the cover cap. The rationale behind **netting**<sup>40</sup> is based on two important arguments. First, the principle that depositor compensation should reflect the overall balance due to or from the individual, rather than one area of his commercial relationship with the bank in isolation. To do otherwise raises the potential for the individual to enhance his position through a system designed to mitigate damage. Moreover, this may prejudice the position of other creditors in the process by securing that individual a higher proportionate recovery than *pari passu*. Second, in the absence of netting there would be a potential mismatch between the sums advanced and the recoveries available to a subrogated claim from the DIS in bank liquidation.

<sup>40</sup> Not to be confused with deducting obligations due by the depositor to the bank from the cover cap. For example, two depositors, one with a deposit of HK\$100,000, the other with a deposit of HK\$180,000 and a currently due loan of HK\$80,000. Both would receive a DPS payout of HK\$100,000 if the cover cap were HK\$100,000. This approach recognises that the depositor does not escape his liability to repay the HK\$80,000 simply because deposit insurance is available, and that both depositors have exactly the same "investment" in the bank.

In liquidation all assets and liabilities dependent on future cash flows are crystallised at the date of liquidation, and obligations due to and from the same creditors are netted against each other. In theory, this would require the liquidator to call in the future payments on outstanding loans, discount future obligations back to current value, and apply set-off where legally valid. In practice treatment may vary on a case by case basis, as set off is a complex area of law, and the acceleration of future cash flows may not be the best means of realising these assets<sup>41</sup>. However, the key issue is that the liquidator's treatment of the depositor's claim may result in a lower amount being eligible for a preferential claim than the amount paid to the depositors by the DIS. Such a mismatch would expose the DIS to increased shortfall risk and thus make the insurance more costly without any meaningful benefit to small depositors<sup>42</sup>.

Any application of exclusion or netting is a trade off between conflicting objectives. This is a policy decision, which has to seek a balance between the competing interests of the insurer in containing risk and legal compatibility with its emphasis on achieving the following:

- ***Speed of payment desired and impact on payment mechanism selected*** - The requirement to exclude categories of deposits or net off other obligations inevitably delays payment to some extent. Delayed payout to depositors detracts from two of the major advantages of a DIS – providing continuing liquidity for depositors and reducing run risk. The latter can increase the risk of a shortfall on recoveries from the estate.
- ***Achieving clarity and transparency in coverage*** – In line with one of the golden principles of deposit protection, clarity and transparency are necessary to ensure the desired level of depositor confidence.
- ***Minimising costs of administration*** - Whilst the degree of cost of implementing the exclusions and set off in the event of a payment is dependent on the ability of the bank's management information system ("MIS") to identify the requisite accounts, there are also subsidiary costs associated with MIS maintenance and regulatory reporting.

The utility of applying any individual exclusion or netting requirements can be in part determined by how well it matches these objectives.

### 7.6.1 Recommendations for netting

It is recommended that overdrafts, arrears on personal loans, currently due obligations under guarantees given by the depositors and all contractually past due sums be netted. Under such an approach there would be no acceleration of claims against the depositors (for example netting off future obligations on a mortgage), and to the extent that depositor obligations are artificially accelerated in law by the act of liquidation, this would be ignored in calculating the net entitlement. Whilst the netting applied differs from that a liquidator can theoretically apply<sup>43</sup>, the

<sup>41</sup> For example, calling in principal instalments of a current loan or mortgage is rarely as productive as selling the loan alone or as part of a portfolio.

<sup>42</sup> However, a new class of preferential claim based on amounts paid by the DIS would eliminate this problem. See discussion in **Section 10**.

<sup>43</sup> This problem would not apply if a new class of preferential claim was created for the DIS –see **Section 10**.

compromise is in the interest of the primary goal of depositor protection and preserving depositor confidence in the protection offered.

Consideration should also be given to making the netting policy applied in the case of any given bank failure discretionary. All depositors in any given bank would be treated alike, but the DIS would have the option of waiving some or all of the netting for any given bank failure. This is intended to ensure that the DIS does not have to net in circumstances where netting cannot be easily applied without undue delay in payments (due to inadequate records, for example), or where netting would otherwise run contrary to the primary objectives of protecting small depositors and contributing to system stability.

The application of any netting runs somewhat contrary to the principle of rapid payment and will result in a certain degree of delay in pay out. However, the policies recommended meet a reasonableness threshold on the trade off between expediency, risk and the public policy arguments noted above. The approach preserves some element of netting to provide a defensible amount of risk mitigation against increased shortfall risk whilst minimising the delay to the payment process. Moreover, and perhaps most importantly, each of the above categories received significant support from banks for netting, who also indicated that identification of matching obligations to deposit accounts was practical.

## 7.6.2 Recommendations for exclusions

**Table 6: Summary of exclusions**

| <b>Deposit Category</b>   | <b>Comments</b>   |
|---|---|
| <b>Held by any group company or affiliate</b>                       | <ul style="list-style-type: none"> <li>• Moral principle – avoiding priority for inter company debt.</li> <li>• Consistent with current Hong Kong law.</li> </ul>   |
| <b>Held by another Authorised Institution</b>                       | <ul style="list-style-type: none"> <li>• Runs contrary to the principle of small depositor protection.</li> <li>• Consistent with current Hong Kong law.</li> </ul>   |
| <b>Term deposits maturing in more than 5 years</b>                  | <ul style="list-style-type: none"> <li>• Rapid payment inconsistent with nature of the asset – arguments for preserving depositors' liquidity do not apply.</li> <li>• Consistent with current Hong Kong law</li> </ul>   |
| <b>Booked with foreign branches of HK banks</b>                     | <ul style="list-style-type: none"> <li>• Funds are outside the Hong Kong payments system and thus have little impact on financial system stability in the first place.</li> <li>• Outside the Hong Kong asset area, which could lead to the DIS to covering overseas obligations with onshore assets.</li> <li>• Potentially covered by overseas DPS, but probably without reciprocal rights.</li> <li>• Supervision difficulties, making it difficult to police risk.</li> </ul> |
| <b>Secured as collateral</b>  | <ul style="list-style-type: none"> <li>• Not a readily liquid asset for the depositor anyway.</li> <li>• Depositor has already secured a benefit in exchange for granting the security.</li> <li>• Increases risk by potentially reducing asset recoveries – reduces ease of recovery of the matching loan.</li> </ul>  |
| <b>Directors, controllers and managers<sup>44</sup></b>             | <ul style="list-style-type: none"> <li>• Consistent with current Hong Kong law.</li> </ul>  |
| <b>Held by the Exchange Fund or a multilateral development bank</b> | <ul style="list-style-type: none"> <li>• Consistent with current Hong Kong law.</li> <li>• No significant impact on depositor behaviour to justify change.</li> </ul>   |

In some countries foreign currency deposits are excluded from coverage because they are not part of the domestic money supply, the balance of foreign currency holdings is small, or the foreign currency reserve position of the country is weak. In Hong Kong, where over 40 percent of total customer deposits are in foreign currency, such an exclusion could render a deposit insurance scheme ineffective. More importantly, it could have an undermining effect on the entire currency management regime.

Inclusion of foreign currency deposits therefore is seen an important requirement for ensuring sufficient scope of coverage and avoiding adverse side effects on the wider monetary position of the SAR.

<sup>44</sup> Whilst the UK and EU Directive seek to exclude relatives of individuals in this class as well, this extension has been omitted from our recommendation on the basis that current Hong Kong law only deals with directors, controllers and managers, and the additional difficulties in identification this would entail.

Each of the above categories should be readily identifiable from the banks' MIS. Their exclusion poses limited disruption to a rapid payment system, can be easily understood by depositors, and has a sound rationale for exclusion consistent with international practice.

### **7.6.3 Co-insurance**

Whilst co-insurance<sup>45</sup> has considerable merit in the preserving market discipline at all depositor levels, co-insurance is contrary to the primary objective of protecting small depositors along the lines envisaged by the MA. Moreover, whilst co-insurance is a common tool in international practice, it often only applies to deposit insurance cover above a level set to provide 100% protection to the poorer members of society. Co-insurance in economies with highly developed social safety nets is a different proposition, which makes direct international comparisons potentially misleading. Given the relatively small proportion of fully covered deposits at both the HK\$100,000 and HK\$200,000 levels, we believe there is a sufficient value of uninsured deposits whose depositors will have the incentive to assess the credit worthiness of banks and thus impose risk management discipline on banks. We would therefore recommend that 100% of deposits up to the chosen cap (e.g. HK\$100,000) should be covered. Co-insurance is not considered appropriate for meeting the DIS objectives for Hong Kong.

## **7.7 Method of Premium Assessment**

If any form of *ex ante* funding is used, decisions on the methodology and level of premium assessments will be necessary. The three most relevant issues pertaining to this are:

- Definition of the assessment base;
- Fixed versus risk-based assessments; and
- Amount of premium.

### **7.7.1 Definition of the assessment base**

The two most commonly used bases for making assessment calculations are total customer deposits and insured deposits. Both measures have been used widely.

Total deposits can be used as a proxy for insured deposits because banks are able to quickly calculate their deposit holdings. This allows them to readily report their assessment base to the insurer and it minimises data processing costs. However, using total deposits means that banks do not pay for protection in proportion to the amount of coverage they receive. Some banks would have a higher relative proportion of insured deposits on their balance sheet than other banks and therefore receive more protection relative to their assessment base. During the bank interviews

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<sup>45</sup> A term used to describe arrangements where the depositor always bears part of the risk e.g. where the DIS payout is a proportion rather than the entire value of his covered deposit. For example, a depositor with a deposit of HK\$100,000 may only receive 90% of this amount in a co-insurance system.

this was a concern of the larger foreign branches whose banking infrastructure is oriented towards higher net worth individuals or institutional accounts, and which in turn hold relatively low levels of insured deposits in relation to total funding. These banks were opposed to a premium assessment methodology that resulted in them cross-subsidising other banks holding the bulk of retail deposits.

Support for assessment based on insured deposits was widespread amongst all banks. Only two banks preferred the total deposit base method, and one of these on a presumption that use of insured deposits alone would entail too high a premium requirement on the insured deposits.

### *Recommendation*

With the benefit of technological progress and modernised information systems, many DISs now assess premia specifically on insured deposits. This is the most equitable approach and it creates a direct link between the amount of protection a bank receives and the premia it pays. It is recommended that the DIS should seek to do the same and set the assessment base on covered, not total, customer deposits. The results of the bank interview round and deposit data survey indicate that most banks will be able to readily report at least the balance of covered deposits on a gross depositor basis. The ability to report coverage net of excludable accounts and other reductions varies among banks to different degrees, but should not be out of reach for any bank over a reasonable period of time.

## **7.7.2 Fixed or risk-based assessments**

### *Overview*

The assessment rate applied to the assessment base could be the same for all banks irrespective of a bank's financial condition, or it could be made to depend on the bank's overall risk. Risk-based approaches are increasingly being adopted in both public and private systems. Risk-based premia impose costs on banks for taking risks, and hence create incentives for banks to limit their risk exposure. They help to promote prudent economic behaviour by banks, which serves to offset some of the market discipline-weakening effects of DISs in general. Moreover, they could ease some of the concerns of larger Hong Kong banks that flat rate premium assessments will result in them subsidising the cost of insurance of weaker banks.

### *Risk based premia*

However, Government setting risk-based premia presents both practical and theoretical disadvantages, which should be considered in relation to these perceived advantages.

First, the nature of deposit insurance makes it an extremely difficult to price risk. The degree of risk concentration within the banking system, the nature of accounting information available on banks, the dynamism of the banks themselves, and the influence of an ever-changing number of externalities all contribute to this pricing difficulty. If a DIS manages to set the risk premia correctly, these premia will be obsolete very quickly in a dynamic financial services industry. Even in most private DISs, the insurer is able to refuse or limit insurance cover to banks where the risk



cannot be acceptably quantified. Second, quite apart from the pricing challenge, government administered schemes are not incentivised or well equipped to risk-price deposit insurance. Since they are not in the business of insurance they are likely to lack internal expertise and sophisticated information systems for employing commercial pricing methodologies. They are also inclined to rely on historic supervisory risk assessments, which are primarily retrospective, rather than market-based risk assessments, which are primarily prospective. Finally, they are monopoly suppliers of deposit insurance and this reduces incentives to properly price insurance. For these reasons, it is a widely held perception that risk-based pricing by Government could just as likely result in over/under pricing of insurance premia as fixed rate assessment, and therefore has potentially little incremental benefit.

One could argue that a risk-based pricing system used by some jurisdictions, even with its shortcomings, is far better than a flat percentage charge. About 22 countries now attempt to differentiate the premia that banks pay according to the risk each bank poses to the DIS. Recognising that this is a difficult task to accomplish, the majority of these countries have begun their experimentation cautiously in order to reduce the negative impact on individual banks' competitive positions from errors in assessing bank risk and to forestall criticism from banks that are asked to pay high premia. Some DISs have set a narrow range for their risk-based premia. Others have systems, such as that in the United States, that place most banks in the same safe category that pays the lowest premium, while only a very small minority of banks pay a higher rate. A number of DISs have methods for assessing risk that appear to be so complex that they deviate from the need to make deposit protection simple and readily understandable. In short, methods for risk-adjusting premia are at an early stage of development. It is for this reason, and the disadvantages noted above, that about two-thirds of all DISs in the world still use fixed rate assessments.

#### *Recommendation*

It is recommended that Hong Kong adopt a fixed rate assessment for premia, at least in the early stages of DIS implementation. Attempts to risk price premia with so many foreign banks in operation and without previous experience in operating a DIS could lead to more difficulties than the advantages it seeks to achieve. Further, given the CAMEL ratings and reported capital ratios of almost all banks in the system, there is reason to question whether risk-based assessments using supervisory information would lead to material differences in the premia banks would otherwise need to pay on a fixed rate basis. If a DIS is put into place, the move to risk-based assessment would be best done at a later stage once the impact of its introduction has run through the system and a base of experience for assessing insurance risk has been developed.



## 7.8 Financing

### 7.8.1 Financing deposit payouts

It is important to distinguish between the need to have liquid funds available to finance an immediate payout of covered deposits and the ultimate costs of insuring a potential shortfall, should the value of covered deposits exceeds that of assets.

Making an immediate payment of, say, 20% to 30% of the deposit base of a failed institution requires a significant volume of finance. These funds will be needed even if all of the funds advanced could be recovered from the failed bank's assets. Maintaining sufficient funds on hand to address such a requirement would require the DIS to emulate the liquidity requirements of those banks that are expected to fail. Even this amount might not be sufficient, because it is difficult to predict correctly the size or number of institutions that may collapse in any given period. Expecting the DIS to pay the entire financing requirement from its own funds would require an extremely large *ex ante* fund to be assembled that was capable of meeting any demand for funds. This would impose a significant financial burden on the premium-paying banks, and it would also raise an issue regarding the best way to invest the accumulated funds.

Building such a large fund does not appear to be either a cost-effective or rational approach, given the relatively low risk of a shortfall occurring in Hong Kong<sup>46</sup>. The need to accumulate a large fund is further reduced by the possibility of borrowing short-term from the Exchange Fund to make a payout. The possible use of the Exchange Fund could be considered in this context in so far as a) it could be determined to be fulfilling the wider mandate of maintaining confidence in the banking sector b) funds committed would be repayable, and any risk could be contained within acceptable levels. It is assumed that the Exchange Fund would be available in both the *ex ante* and *ex post* scenarios.

### 7.8.2 Financing requirements

To be fully effective, the financing facility from the Exchange Fund would have to be either open ended, or capped at a level sufficiently high to meet the liquidity needs of the DIS in almost any conceivable circumstance with discretion for increases by the Financial Secretary. Any limitation on funds available could damage the credibility of the DIS to meet payouts under all circumstances, particularly in regard to larger banks in the system. The amount of finance likely to be required is almost impossible to forecast, as this will vary depending on the size and number of institutions failing in any given period. Given the different sizes of Hong Kong banks, this variation could be significant. Possible financing costs for the simultaneous failure of four medium sized banks in Hong Kong were modelled. With an assumed payout of 100% of covered deposits within 3 months, and recoveries from assets achieving 25%<sup>47</sup> of covered deposits within the same period, the model indicated the following financing requirements:

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<sup>46</sup> See **Indicative DIS Premia, Section 6.**

<sup>47</sup> Given the quantity of liquid funds held by most banks, and the preferential claim status of a DPS, this does not seem unreasonable and may be conservative. However, there would be some legal technical issues to be overcome in authorising the payment of dividends prior to the appointment of a liquidator.

**Table 7: Financing requirements**

|  | Coverage Cap of: |              |
|--|------------------|--------------|
|  | HK\$100,000      | HK\$200,000  |
|  | (HK\$ 000's)     | (HK\$ 000's) |
| Smallest bank's funding requirement                | 2,393,853        | 3,765,683    |
| Largest bank's funding requirement                 | 5,064,475        | 7,801,270    |
| Estimated peak funding requirement –all four banks | 16,477,356       | 24,905,523   |
| Total covered deposits for all four banks          | 21,969,808       | 33,207,364   |

The above forecast anticipates a two-stage payout, with a 25% advance on the closure of the bank, and the balance following within 3 months. If the entire advance was paid on bank closure, or the 25% asset recoveries were not achieved before the balance of the payout was made, the financing requirement could be as high as the entire value of the covered deposits. If a higher value of asset recoveries could be achieved within the three month period the funding requirements would be lower. The maximum financing requirement is the level of covered deposits of the failed banks, less any *ex ante* fund available. The Exchange Fund requirement is only for liquidity; any shortfall on asset recoveries and the cost of borrowing the funds in question from the Exchange Fund should be met by the DIS in all but systemic crises. In such circumstances, more extensive Government financial support and use of the Exchange Fund may be necessary in any event.

### 7.8.3 Financing costs

Borrowing from the Exchange Fund would incur interest costs and poses a question as to how large these borrowing costs would be. The nature of banking in Hong Kong serves to limit these financing costs. First, the liquid nature of banks' assets should enable a comparatively rapid realisation of funds which would shorten the duration of borrowing. Second, the liquidator may be able to quickly pay to the DIS the funds due to it under the preferential claim entitlement under s.265 CAP 32. Before paying dividends to the DIS, the liquidator (in theory) needs only to be satisfied that asset realisations will be sufficient to meet both the costs of the liquidation and paying the comparatively small class of higher-ranking claims. Giving the liquidator: (1) an indemnity for the funds paid to the DIS and (2) an undertaking to refund dividends if higher-ranking claims require it, should encourage the liquidator to pay the DIS promptly and so relieve the borrowing requirement from the Exchange Fund.

Financing costs may be further reduced by:

- a) using the funds accumulated in an *ex ante* DIS to partially meet the need for liquidity (as noted below, this is unlikely to have a material impact, however);

- b) requiring and closely monitoring minimum asset levels, particularly liquid assets, at banks<sup>48</sup>;
- c) an early calculation and call down of funding contributions from member banks in an *ex post* DIS, or in an *ex ante* DIS where this provides for additional premia to be paid if the initial funds are exhausted; and
- d) delaying payment of some part of the insured amount. For example, making an immediate, limited, initial advance might be followed by paying the balance in 3 months. Nonetheless, some element of financing cost would be unavoidable with a small fund. Such costs should be recognised to form part of the cost of the DIS and, as such, will need to be paid under either an *ex post* or an *ex ante* DIS.

#### 7.8.4 Conclusion

The size of initial payout is likely to exceed the amount of funds available at any but the largest of *ex ante* DIS. Consequently, the need to borrow and meet the consequent financing costs can be assumed. Once that assumption is accepted, the only question that remains is whether the financing cost would differ significantly between the two funding approaches. A substantial difference in cost could influence the choice between an *ex post* and an *ex ante* DIS. However, the findings of separate modelling of this issue suggest that financing costs should not materially affect a choice between the two schemes.

The liquidity needs following the collapse of even one medium-sized bank would significantly exceed the amount held in an *ex ante* DIS in Hong Kong that charged only an annual premium sufficient to cover the costs of borrowing and meeting any expected shortfall in recoveries. The analysis conducted shows that other actions are more important to reducing financing costs than opting for an *ex ante* DIS. The important determinants of funding costs are, in practice, the timing of the payout, the amount of liquid assets that are readily available at the failed bank, and mechanisms that facilitate the payment of early dividends to the DIS. The analysis showed that the financing cost would, as expected, be marginally lower where *ex ante* financing was available. However, the saving would not be significant in relation to the total costs of the exercise or the premia that would be levied.

In either the *ex ante* or *ex post* approaches, the cost of financing is real and needs to be covered by the DIS. Whether the funding cost is paid from the balance accumulated in an *ex ante* DIS that is then topped up by subsequent premia, or by enlarging the *ex post* premia, is not material to the choice between the two approaches.

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<sup>48</sup> See the discussion of Minimum Asset Maintenance Requirements in Section 10.

## **8. TRIGGER CONDITIONS**

### **8.1 Design Criteria for a Trigger Condition**

The trigger for a DIS is the point in time at which it is required to advance funds for the payout to depositors, or to finance an alternative resolution mechanism (for example, funding the transfer of protected deposits to a new bank), due to the failure of an insured institution. The key aspects of its design within a DIS should be consistent with:

- Minimising DIS cost;
- Providing a clear, transparent point of payment;
- Allowing the regulatory authority to respond to unforeseen circumstances for the purpose of containing DIS loss whilst not undermining the objectives of deposit protection;
- Clarity of purpose; and
- Protecting the interests of depositors and funding banks.

These principles set forth fairly broad requirements for the trigger conditions of a DIS that indicate the need for both minimum requirements and flexibility in approach.

### **8.2 Link to Preferential Claim**

The preferential claim right is a significant factor for containing the cost and risk of a DIS. As such, the DIS should only pay out where the payment will not compromise its preferential claim rights<sup>49</sup>. Trigger conditions should reflect this prerequisite. Note that this does not limit the use of a DIS to a liquidation. It could be used to support a rescue provided that the DIS was reimbursed, and care taken to maintain its preferential rights as a fall back if the rescue failed. There are a number of possible approaches that would allow this, including the use of a provisional liquidation to shelter the rescue plan.

### **8.3 Discretionary vs. Obligatory Triggers**

Given the nature of protection afforded by a DIS and the possibility of unforeseen circumstances in the resolution of bank distress, it is vital for the MA to have some discretion in determining the appropriate timing of DIS payout. Waiting for a formal winding up order to be issued could result in hardship to depositors. Such an order can take time to issue, particularly where the final outcome of the case is not certain. In BCCHK the order was only issued 8 months after the bank was closed, once the possible sale of the bank was abandoned. Moreover, a winding up order may not apply in all cases; for example, where a DIS loss is inevitable, but where some other form of non-liquidation resolution requiring temporary closure of a bank is deemed

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<sup>49</sup> The introduction of a new category of preferential claim providing a specific preferential claim for a DIS, rather than relying on subrogation of depositors' rights, would reduce the sensitivity over the timing and trigger preconditions for a DIS pay out in this regard.

an appropriate and value preserving alternative. A discretionary trigger would enable the DIS to be utilised to protect covered depositors in such circumstances.

The potential for use of a discretionary trigger, however, should be complemented by the use of a *minimum* – or obligatory – trigger to provide the depositor with certainty of cover even when the discretionary triggers are not used. Liquidation is an ideal obligatory trigger, since in the absence of a rescue its use is inevitable where a bank is unable to meet its obligations.

## 8.4 Suggested Trigger Conditions

Drawing on the above, we would recommend the following trigger conditions:

*Compulsory trigger:*

- 1) Where a winding up order is issued against a bank, the DIS should pay out; or

*Discretionary triggers:*

- 2) Where a Manager has been appointed to the bank under s.52 CAP 155, or a petition for the winding up of the bank has been presented; *and* one of the following two conditions applies:
  - the MA believes the bank is either likely to become unable to meet its obligations, or that it is insolvent or about to suspend payments to depositors<sup>50</sup>; or
  - the MA believes it necessary to protect depositors, or to promote the general stability and effective working of the banking system<sup>51</sup>,

then the MA may direct the DIS to payout.

The use of these triggers would provide the desired goals of a clear cut and readily understood obligatory trigger, which would only operate when the preferential claim entitlement was certain. It would also add a significant degree of flexibility for the MA, allowing the use of the DIS as part of interventions to rescue as well as liquidate banks. Close co-ordination between the MA and the DIS on the appropriate timing of the DIS payout is essential in this regard, but as a matter of good practice should be routine procedure anyway.

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<sup>50</sup> Mirroring the language used in s.52 (1) CAP 155.

<sup>51</sup> The latter element being a catch-all phrase mirroring the wording of s.7 CAP 155.

## 9. MODEL DEPOSIT INSURANCE SCHEME

For ease of reference, the primary features of a model DIS for Hong Kong that incorporates the recommendations made in this study are summarised below. The exact design of the DPS ultimately selected, if any, is subject to the wider consultation and implementation exercise planned. However, the framework set out below provides a useful basis for discussion, wider consultation and evaluation.

**Table 8: Summary Indicative DIS Term Sheet**

| Design features                     | Comments  |
|-------------------------------------|---|
| <i>Banks covered</i>                | All fully licensed banks would be required to be members of the scheme.   |
| <i>Coverage cap</i>                 | HK\$100,000, reviewed periodically.   |
| <i>Structure and administration</i> | A separate legal entity carrying out a “paybox” function – calculation and collection of premia, and administration of payouts. Actual payment outsourced to the Manager or Liquidator of the bank. Close liaison with the MA. Governance structure to be determined but possible board representation by MA and member banks.  |
| <i>Funding</i>                      | Exact funding arrangements to be determined, but in principle the member banks meet all costs incurred subject to an overriding cap. The DIS will build a “core fund” sufficient to deal with most shortfall and financing costs, and to handle small bank failures without further liquidity support. The Exchange Fund will provide funds to meet the immediate depositor payout requirements where these exceed funds on hand, but any funds advanced will be repayable with interest.   |
| <i>Premia</i>                       | To be determined once the exact scheme design is agreed. However, a premium of 10 basis points or less, possibly suspended after three years, seems feasible at this stage.   |
| <i>Basis of coverage</i>            | Coverage would be by depositor, adjusted to allow for interests in joint and multi beneficiary accounts. However, the total cover received by any one depositor would not exceed HK\$100,000. The main exclusions to cover would be deposits booked with overseas branches of banks, and those depositors already excluded from preferential claim cover detailed under s.265 CAP 32. Claims would be net of currently due obligations to the bank such as overdrafts and overdue loans, but not future instalments of current loans, provided these were not in default. |

## **10. ADDITIONAL ISSUES FOR CONSIDERATION**

### **10.1 Introduction**

In the course of this study a number of matters have arisen which are related to, but do not directly impact, the determination of DPS policy. Set out below are several issues for consideration in developing the wider framework for design and implementation of an enhanced DPS for Hong Kong.

### **10.2 Supervision as Primary Defence against Moral Hazard**

DISs can promote moral hazard by encouraging banks to seek risk without the threat of depositors withdrawing their money. Since small depositors are given a third-party guarantee on their money, they do not need to assess the risk of the bank in which they place their money. Notwithstanding service, convenience and the other criteria that are considered in the “where to bank” decision, covered depositors have no reason to discriminate between banks by what the banks do with their money. This enables banks with diminishing franchises to increase investable funds by offering high interest rates for deposits, and place the funds in higher risk projects in search of “super profits”.

Moral hazard can be reduced by careful design of the DIS, but a DIS cannot be designed in such a way as to exclude it completely. The existence of moral hazard is a popular criticism of such schemes. However, DISs should not be regarded in isolation. They are only a component of a wide package of measures. The primary defence against moral hazard risk is strong supervision and regulatory intervention. Whilst the existing supervisory function of the MA is well regarded in the industry and considered effective by international standards, the introduction of a DIS should be accompanied by enhancements to regulatory and supervisory practices. This would mitigate the adverse effects of moral hazard on the system and to ensure regulation is consistent with the risk management needs of the DIS. Accordingly, it should help to control the overall cost of the DIS.

The substance of strengthened supervision should address at least the following:

- Further emphasis on risk-based examination for issues significant to a DIS (for example changes in asset quality and liquidity, changes in deposit structures, interest rates offered on deposits etc);
- Defining precisely the role and responsibilities of the MA in respect of safeguarding the interests of the deposit insurer, where these organisations are separate; and
- Careful use of the MA’s powers under the Banking Ordinance to influence banks’ activities to curb abnormal risk-taking by banks.



## 10.3 Minimum Asset Maintenance Requirements

### 10.3.1 Overview

Hong Kong differs from many jurisdictions in that there is an established priority for depositors' claims already in place, and that any system of DPS introduced will be additional to that layer of cover. The two are however likely to be inextricably linked. The preferential claim will form the primary recourse for the DIS to recover funds advanced, and is of overriding importance in reducing premia and risk. Not only does a preferential claim on the assets of any institution significantly enhance a creditor's prospects of recovering his claim in whole or part, but this is especially so in banking. Bank assets tend to be far more liquid and less exposed to a significant gap in realisable value between going concern and insolvency than assets in a non-financial sector company. Quite apart from the nature of the assets, banking regulation and supervision concentrate on such issues as liquidity maintenance and risk weighted capital adequacy ratios ("CARs"). This provides a tendency for any institution in a well regulated sector like Hong Kong to have a high proportion of good quality assets. This is matched by the propensity of Hong Kong banks to maintain relatively high CARs and liquidity ratios by international standards. However, for this general pattern to translate into practical recovery by Hong Kong creditors in the event of a collapse, three conditions must be met:

- There must be sufficient realisable value of assets available to address the priority claim;
- The assets must be available for liquidation in the Hong Kong jurisdiction; and
- The assets must be free from prior ranking security rights recognised in Hong Kong.

The second condition is particularly sensitive. In addition to the usual concerns over the mobility of financial assets, Hong Kong's priority claim system for depositors is inconsistent with many other jurisdictions. As such, a subrogated claim from a DIS for monies advanced to depositors may only receive at best an ordinary claim status in an insolvency conducted in a different jurisdiction. It is even possible that claims may be deferred to domestic claims, or ruled out all together because the subrogation is not recognised. Given the high proportion of foreign bank branches in Hong Kong, this is a significant issue. A subset of the same point is that the foreign jurisdiction may admit claims that would not be accepted in Hong Kong, thus further diluting the recovery achieved.

In addition, the recovery on assets is, to varying degrees, inversely correlated to the probability of failure. Banks often experience significant asset contraction leading up to the point of failure as information about the bank's position reaches uninsured depositors and prompts them to withdraw their money. The extent to which this relationship will hold for any particular bank depends on a number of factors, such as its balance sheet structure, liquidity support from regulators, and market circumstances existing during the period of distress.



### 10.3.2 Asset monitoring for DIS

Given the significance of the above for a DIS, and Hong Kong depositor and other creditor protection generally, it is worth considering additional mechanisms for ensuring that the above three conditions are met. One solution would be to introduce mandatory reserve requirements to ensure a minimum value of unencumbered assets held by a third party, most probably the Exchange Fund. However, this runs contrary to Hong Kong's policy to date, and its introduction may not be considered desirable. As an alternative the MA could modify the monthly assets monitoring process to differentiate between unencumbered assets in the Hong Kong jurisdiction, separately identifying liquid assets, and assets held outwith the jurisdiction. The revised return could also identify the level of claims falling under the priority claim system<sup>52</sup>. The return could be required on a more frequent basis where an institution was thought to be in potential difficulties.

Where the ratio of unencumbered assets to DIS obligation began to fall below an acceptable level, the MA could then exercise its general powers. It could require the troubled institution to "ring-fence" an appropriate volume of assets ensuring sufficient unencumbered assets were available, and free from use or charge, to meet preferential claims in the event of a collapse. Of course, this would remove liquidity from the institution, so considerable discretion would have to be used. None the less, the ratio would form a useful early warning system for ensuring prompt and appropriate use of the DIS, and a complementary tool for the existing suite of monitoring mechanisms used by the MA in its wider role.

### 10.3.3 Prior survey results

The MA has already piloted a similar return for 47 banks in September 1999 as part of its Y2K preparation. The survey assumed a preferential claim limit of HK\$100,000 and a possible advance payment of 25% of the covered sum. Asset values were discounted by the standard liquidity conversion factors in accordance with the usual MA reporting requirements. The results not only indicate that banks can readily provide the information, but also provide confidence that most banks routinely maintain satisfactory levels of cover. No bank had a ratio of qualifying assets<sup>53</sup> to the total priority claim of less than 100%, and the average ratio was 514%. If this result were generally indicative of the wider banking community<sup>54</sup>, it would imply that the imposition of minimum asset maintenance requirements might not constitute a significant burden to banks. It would contribute to the limitation of shortfall risk, and consequently premia paid by the wider banking community.

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<sup>52</sup> Separately identifying the proportion qualifying for an advance payment, if the DIS system adopted a split payment approach.

<sup>53</sup> Book value of assets available in Hong Kong, less standard liquidity conversion factors.

<sup>54</sup> Note that the original survey may be an unrepresentative sample, as it only covered foreign incorporated institutions. Both deposit taking and asset maintenance profiles of local and foreign banks may be significantly different. The exercise should be repeated for all authorised institutions to allow a proper assessment of the impact of introducing a minimum asset maintenance requirement before a final decision is taken.

## **10.4 Liquidity Support – Reduction in Asset Cover**

If, as under current arrangements, security over assets is taken in exchange for liquidity support, this may reduce the assets then available to refund the DIS if this was subsequently triggered. The extent to which this could be a problem depends of course on the relative volume of assets, liquidity support provided and depositors' claims. While it is worth noting that the liquidity advanced during the period in which a bank remains open is unlikely to be utilised solely for deposit payment, funds used for the payout of depositors may not reduce depositors' claims on the DIS dollar-for-dollar. Even if the MA prohibits further deposit taking and limits the use of funds provided to depositor payout, there is a risk that depositors may simply withdraw the uninsured element of their deposits. In such circumstances there is a possibility that lender of last resort support will not only fail to reduce DIS risk, by taking security over assets it might actually reduce the amount of assets available to cover the DIS payout if the bank does subsequently collapse. This simply highlights the importance of close co-ordination of the triggering of the DIS with alternative rescue attempts, and in particular the prudent use of the lender of last resort facility.

## **10.5 Early Distribution against DIS Preferential Claim**

The earlier repayments can be made to the DIS, the lower the absolute amount of liquidity support that may be needed from the Exchange Fund, and the smaller the financing cost borne by the DIS. As already noted, the high incidence of relatively liquid assets anticipated in a bank, coupled with the relatively low proportion of preferential vs. total claims and their priority status, should make early payments of dividends on preferential claims feasible. However, there are potential administrative obstacles to overcome even where there are sufficient realised funds available.

It is assumed that a winding up petition will have been submitted where there is a possibility that the bank is insolvent. However, where a winding up order has not yet been issued and only a Provisional Liquidator is in post, there is a technical problem with payment of distributions. A Provisional Liquidator is not normally authorised or expected to approve claims and distribute dividends. That role is usually reserved for the full Liquidator following a winding up order, because the preferential claim itself is not finally constituted until the winding up order is issued. This poses a problem as to how to authorise early payments where the winding up order has not been issued.

Three possibilities seem apparent:

- Complete the winding up order;
- Request the Court to authorise the Provisional Liquidator to make a distribution; or
- Request the Provisional Liquidator to make the payment, and provide him with an indemnity and an undertaking to refund the monies if necessary.

The completion of the winding up order is by far the cleanest solution from a technical perspective, but may be impractical. The winding up order may have been

deliberately delayed whilst a value maximising rescue was sought<sup>55</sup>. Equally, providing the Provisional Liquidator with the power to make a distribution would run contrary to general practice, although as no creditors are likely to be prejudiced by it is conceivable that the Court may authorise this where specific circumstances warranted it. Finally, it would seem highly likely that any Provisional Liquidator would require an indemnity and refund undertaking before making any early distribution in any event, and as such this may be a practical and simple solution. None the less, it would be preferable to have an unquestionable legal basis for such distributions, even if the payment did not result in prejudice to any other creditor.

The best means of resolving the problem will vary dependent on individual circumstances. Where there is no reason to delay a winding up order, an early completion of this process is the best approach. However, as a matter of contingency planning it could be sensible to explore means of sanctioning alternative approaches with the judiciary and legislative authorities prior to the introduction of a DIS.

## **10.6 New Class of Preferential Claim for DIS Advances<sup>56</sup>?**

The creation of a new preferential claim category could remove uncertainties over the exact status of a DIS subrogated claim. Instead of the DIS relying on a subrogated claim to secure preferential claim status, an additional clause could be added to s.265 CAP 32 conferring priority status on the funds actually advanced to a depositor in respect of his preferential claim. As discussed in the **Section 7**, on netting and exclusions, this would also simplify the computation of the DIS's preferential claim. The complexities of different approaches to set off and exclusion taken by the DIS and liquidator would be cut away. It would reduce the need to concentrate on accurate and comprehensive identification of all requisite netting and exclusion classes before making a payout, reducing the risks inherent in such a process and accelerating the speed of payout possible. This approach has the apparent simplicity of eliminating any possible gap between the amount advanced by the DIS and the amount ranking for a preferential claim in a subsequent liquidation. For that matter with careful drafting the DIS could secure preferential claim status even where the amount advanced to the depositor was in error, provided appropriate protection was in place to ensure this arose in good faith and not through gross negligence or intention.

However, despite the obvious advantages, there is an issue as to whether the introduction of a completely new class of preferential creditor would be acceptable to the legislative authorities, particularly in light of an existing depositor preferential claim class and subrogation rights. The very aspects that make such an approach appealing to the DIS<sup>57</sup> have the potential to directly prejudice ordinary creditors' rights. Of course, any prejudice to interbank creditors would be mitigated by a consequent reduction in DIS funding premia.

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<sup>55</sup> Because of the contractual and statutory consequences of a winding up order.

<sup>56</sup> Although the adoption of such an approach would ease some of the practical considerations in deciding which model and generic design features to adopt, none of the recommendations made elsewhere in this study is reliant on it. They have assumed reliance on less substantive revisions to the existing legal position.

<sup>57</sup> The potential for the DIS to secure preferential rights in excess of those allowed by a liquidator to the depositors, and as such avoiding the normal set off constraints regarding claims being crystallised at the effective date of insolvency.

There is no doubt that the introduction of a new class of preferential claim that gave the DIS preferential claim status for amounts actually advanced, rather than relying on subrogation, has significant advantages in terms of simplicity and neatness. It should be relatively simple to restrict the depositors' own preferential rights to ensure the most obvious issues of double counting are eliminated. Whether it is a viable approach is going to be largely dependent on the reaction of the public and legislative authorities, and significantly outside the remit of this report. For the sake of simplicity we simply note the possibility for further development and exploration by the MA.

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